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SURGICAL ASPECTS OF CONGENITAL HEART DISEASE*

BY

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There is a new outlook in congenital heart disease. Overburdened in the past with embryological detail and developmental complexities, the study of congenital cardiac malformations has received in recent years a fresh impetus from renewed clinical and radiological studies, and particularly from the brilliant achievements of the surgeons working in this field. To share in these advances the family doctor will take note of the contributions which surgery is now making. His is the first opportunity to establish the diagnosis and to advise regarding treatment. It is my intention to present a brief account of the congenital defects at present considered amenable to surgical correction. Of these there are two—the patent ductus arteriosus and coarctation of the aorta—both, fortunately, easy of detection by simple clinical methods.

For the most part congenital heart disease is occult. All too frequently it remains undetected throughout childhood, masquerades in adult life as an acquired lesion, or, deceptive until the end, reveals itself only at necropsy. Dismiss from consideration the weakly puny infant, cyanosed even to a deep plum colour, for whom death comes as a merciful relief. Such a conception of congenital heart disease is inadequate, for cyanosis with its attendant finger-clubbing and poor physique is more often the exception than the rule. In childhood there is usually no gross manifestation of the underlying defect. Symptoms in the usual acyanotic patient are generally minimal or absent, though admittedly they are liable to flare into prominence when serious and perhaps irremediable complications develop. Nowadays, when aetiology plays so large a part in the comprehensive diagnosis of heart disease, the probability of a congenital lesion even in the adult must be thought of more often and sought for by definite methods.

If surgery is to play its full part in the prevention of invalidism and early death, every endeavour must be made to establish the nature of the anatomical flaw during childhood, and preferably before 10 years of age. Repair of the defect in early life permits normal growth and development and safeguards the individual from the killing complications. In the child the surgeon will obtain easier access to the lesion, and, as the mortality rate for intrathoracic intervention increases with each decade (Edwards, 1939), it is a sound principle to advocate early recognition and correction of the congenital flaw.

The Patent Ductus

In foetal life the most distal part of the aortic arch beyond the origin of the three main trunks is united by the ductus arteriosus to the main stem of the pulmonary artery at the point of its bifurcation. Blood expelled by the right ventricle is conveyed via the pulmonary artery, ductus, and descending aorta to the placenta.

When the ductus fails to close, blood-flow through it is reversed, the work of the heart increased, and with the passage of time physical signs develop so that as a rule by the age of 4 or 5 years the diagnosis can be established with confidence. Symptoms are trivial, but a noteworthy murmur, systolo-diastolic in time, characterized by its continuous quality and maximum in intensity at a site a little below the inner end of the left clavicle, develops as a rule by the time school age is reached. To the trained ear the recognition of the murmur is simple, and the diagnosis can be established readily by the detection of this remarkable physical sign, well entitled to the name of the Gibson murmur.

When the leak from the major circuit to the pulmonary artery is large—and it may amount to 50% or more of the left ventricular output—the heart enlarges, but the most striking changes occur in the pulmonary artery, which dilates to accommodate the increased blood-flow (Figs. 1 and 2). The lung fields become more vascular and the diastolic blood pressure falls. Physical exertion aggravates these signs. The murmur then becomes louder and roaring in quality, and the diastolic pressure drops to even lower levels but returns to its former figure usually within a minute of completion of a simple exercise test. For the time being the patient may present all the outward appearances commonly associated with a free aortic regurgitation—pallor, bounding neck vessels, the Corrigan pulse, and even capillary pulsation. This test, described by Bohn (1938), can be applied on occasion with advantage, but unfortunately readings of diastolic pressure are difficult to obtain in a child under 5 years, when in the absence of the fully developed Gibson murmur a positive test would be of most value. In older children or younger adults an exercise test may prove helpful in the elucidation of pulmonary systolic murmurs of doubtful origin.

It has been estimated that the presence of a patent ductus reduces the expectation of life by half even among those surviving to age 17 (Keys and Shapiro, 1943). Clinical experience indicates that this defect is seldom encountered after the age of 40, the commonest complication being a bacterial endarteritis of the pulmonary artery—until recently a uniformly fatal disease. This is an infection exactly analogous to bacterial endocarditis but localized in the first instance to the damaged intima within the pulmonary artery immediately opposite the mouth of the patent ductus. A swinging temperature, patchy pulmonary signs attributable to multiple lung infarcts, and a localized Gibson murmur, then sometimes heard best towards the mid-clavicular region, are the main components in an important diagnosis which can be confirmed by positive blood cultures and by repeated radiological examinations of the chest (Gilchrist, 1945). Surgical ligation of the ductus promises a prompt recovery in at least 50%. Medical measures such as blood transfusions, sulphonamides, and penicillin have little to offer and are not in themselves to be regarded as curative.

Is it not better to attempt to forestall the killing complications of the patent ductus by ligating the channel in early life, when the child is relatively fit and capable of withstanding this intrathoracic procedure, than to wait to a later age when, in the presence of a blood-stream infection and multiple lung infarcts, the operative risks are ten times as great? Early ligation permits normal growth, encourages an adequate nutrition, and prevents the development of a local infection without the handicaps of an uncertain invalidism which, extending over the years, becomes quite frequently the basis of a cardiac neurosis. With ligation successfully accomplished the child can approach

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adult life with confidence and with full expectation of an unimpaired physical capacity.

Differential diagnosis seldom gives rise to difficulty. Cyanosis is not a feature. Clubbing of the fingers does not occur. The auscultatory signs are restricted to the region of the pulmonary artery, and though a systolic murmur, a prominent and overactive pulmonary artery on cardioscopy, and a positive exercise test might together suggest the diagnosis in the absence of the Gibson murmur, yet surgery would not be justified were this distinctive auscultatory sign consistently absent.

Ligation of the Ductus

The surgical procedure is less formidable than might be supposed. Children stand the operation well. The original transpleural approach devised and perfected by Gross (1939a, 1939b, 1944) has been modified by Touroff (1942). Increasing experience of the advantages of subadventitial dissection on the arch of the aorta, as advocated by Touroff, fully substantiates his claim that this procedure reduces the likelihood of injury to the flimsy-walled ductus, simplifies and shortens the operation, and facilitates the application of the ligature as close to the aorta as possible, thereby reducing the likelihood of recanalization. Ligation by this method appears preferable

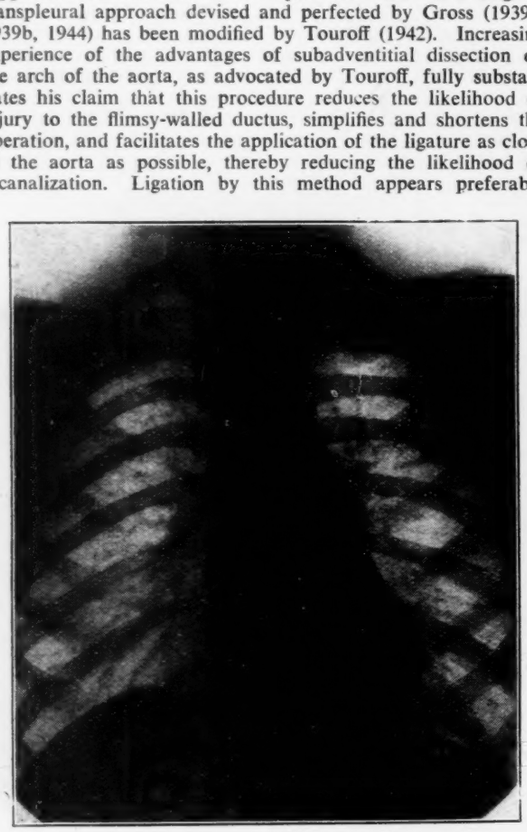

FIG. 1.—Teleradiograph showing the characteristic heart outline of a patent ductus in a youth aged 18. The heart size is within normal limits, but the pulmonary artery, which makes a prominent bulge on the left border between the aortic knuckle above and the ventricular mass below, is enlarged. There is increased vascularity of the lung fields. The presence of a patent ductus was confirmed at operation.

to the risks associated with complete surgical division of the ductus.

During the past five years 40 patients with persistent patency of the ductus have been under my personal observation (Gilchrist, 1946). In four the pulmonary artery was infected. Three of these came to operation. Only one, a girl of 6 years of age, survived. She made a prompt and brilliant recovery after an illness of six months' duration. This child is in perfect health a year after surgical ligation. Two patients died as a result of massive pulmonary collapse, each on the third day after operation. The fourth patient, following an illness of thirteen months' duration, died without operation ten days after the diagnosis was first made. Of 33 cases of subacute bacterial endarteritis collected by Shapiro and Keys (1943) surgical ligation of the ductus was completely successful in 20. Tubbs (1944) has reported recovery in 6 of 9 infected patients.

Among 16 non-infected patients, submitted to surgery in reasonably good health, we have had two deaths—one from haemorrhage from a torn ductus and one from mediastinal sepsis. A large measure of compensation for these two bitter disappointments has been found in the remarkable benefits already obtained in the group of 14 surviving patients. For a variety of reasons ligation has not so far been undertaken in 20 of our patients. Shapiro and Keys (1943) collected 107 non-infected cases. Ligation was completely successful in 81, and 9 patients died at or shortly after operation. After the age of 10 operative mortality increases year by year, so that over the age of 20 surgery can be justified only if symptoms are severe enough to warrant the risk. At the other end of the scale it is desirable to postpone intervention until the duct has had every opportunity to close spontaneously. The great majority of children should have the ductus ligated between 7 and 10 years of age.

Coarctation of the Aorta in Children

There are now good prospects of correcting this curious anomaly by surgical resection of the aortic stricture. Unfor-

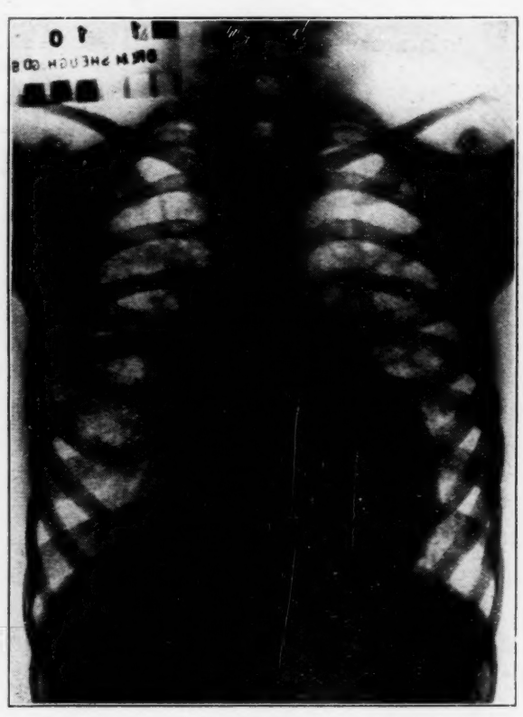

FIG. 2.—Teleradiograph of an enlarged heart in a child aged 4, with greatly increased vascularity of the lungs. The branches of the pulmonary artery are enlarged, but the pulmonary arc itself is not prominent. Patent ductus arteriosus confirmed at operation.

tunately the defect, though easy of diagnosis, commonly passes undetected in childhood. Eisenberg (1938), reporting the clinical recognition of coarctation in three children, was able to find in the literature only 15 examples under the age of 14, as compared with accounts of 114 adults. It is with the object of emphasizing its clinical recognition in early life that I record four cases, seen during the past six months, in which this flaw produced characteristic physical signs (see Table).

In the adult, as is well known, the constriction commonly situated distal to the origin of the left subclavian artery is accompanied by high blood pressure in the arm, neck, and head, and low pressure in the arteries, distal to the obstruction. Dilated pulsatile scapular and other arteries frequently visible on the chest wall circumvent the aortic obstruction, empty into the intercostals, in which blood-flow is reversed, and thereby provide anastomotic channels sufficient to meet the needs of the tissues distal to the coarctation. With the passage of time hypertensive symptoms commonly develop, the heart enlarges, the proximal aorta dilates, aortic incompetence results, and death occurs from congestive heart failure, cerebral haemor-

Coarctation of the Aorta in Children

Case No.	Sex and Age (Years)	Weight (lb.)	Height (in.)	Femoral Pulsation	Scapular Pulsation	Blood Pressure		Rib Notching	Remarks
						Arm	Leg		
1 (a)	M 8½	58 (26·3 kg.)	52 (132 cm.)	Absent	Present	114/74	Undetectable	Present	A rheumatic child
1 (b)	12	77 (34·9 kg.)	59 (150 cm.)	,,	,,	140/96	90/?	,,	Frank mitral stenosis now present. Active boy; plays games vigorously
2	M 8	61 (27·7 kg.)	51½ (130·8 cm.)	,,	Absent	152/86	Undetectable	Absent	Very active; climbs trees, saws wood. Prominent carotid pulse
3	F 12	Thin	Tall	Very feeble	,,	178/80	110/94	Very slight	Coexistent patent ductus. No complaints. "Unusual pulsation in the neck since a baby"
4	M 5	49 (22·2 kg.)	44 (112 cm.)	,,	,,	146/98	90/?70	Present	Tires easily, but able for school. A lively, active boy

All four children had harsh left basal systolic murmurs. An interval of 3½ years separated the two examinations in Case 1. The leg blood pressures were recorded from the right popliteal artery. The arm pressures were noted in each arm, the figures from the right side being recorded in this table.

rhage, infective endarteritis, or aortic rupture, usually before age 45 is reached. The radiological examination depicts left ventricular hypertrophy, an absent aortic knuckle, and notching of the ribs as a result of the enlarged and tortuous intercostal arteries (Fig. 3). Even with the adult in the left oblique position it is seldom that radiology can demonstrate the site of the actual coarctation (Brown, 1939). Fig. 4, a skiagram from a man aged 49, is therefore exceptional. In it the aortic constriction is clearly outlined as a result of degenerative changes in the vessel wall. Intravenous diodrast may prove helpful to the surgeon in the future, as by this means the nature and site of the coarctation may perhaps be determined with accuracy (Nicolson, 1940).

As aortic coarctation is generally symptomless in childhood it is a condition found only by making a thorough examination.

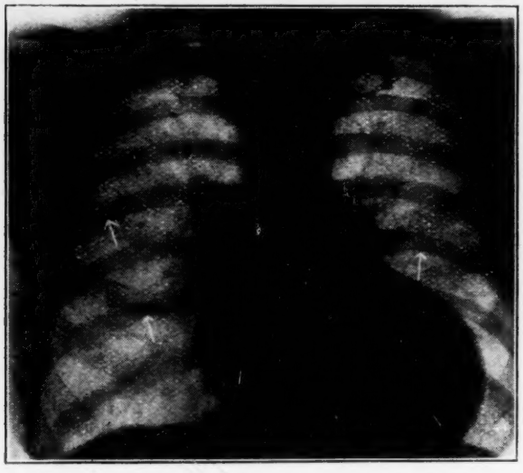

FIG. 3.—Teleradiograph depicting the typical features of coarctation of the aorta in an adult—a man aged 49. The noteworthy feature is the combination of absence of the aortic knuckle, left ventricular hypertrophy, and the presence of notches on the lower edges of several ribs.

Suggestive clues as to its presence are: (1) a left basal systolic murmur—often called a "pulmonary systolic"—perhaps as well heard in the left interscapular region as in front of the chest; (2) bounding neck vessels; and (3) a raised brachial blood pressure. Confirmation of the presence of coarctation can readily be obtained by femoral palpation—the feeble or absent pulse in the groin, and the almost negligible pulse pressure in the popliteal artery with distant sounds when the blood-pressure cuff is applied immediately above the knee, being observations of the greatest significance. Similarly, more frequent blood-pressure readings in childhood will be the means of detecting coarctation at an earlier age. If the standard cuff is too large, overlapping at the shoulder or elbow, it is only necessary to fold it in half, so as to reduce its width, before its application to the child's arm. Reliable readings can then be obtained simply and accurately. Rarely, the coarctation is immediately proximal to the origin of the left subclavian artery. Hypertension is then confined to the right arm. As a result of the more abundant blood supply the right arm may exceed the left in size (Schwartz and Greene, 1942). If coarctation of the aorta is to be recognized at the most opportune time—that is, in childhood, when the prospects of surgical help are optimal—it is worth while to cultivate the habit of palpation of the femoral arteries in the groins, just as palpation of the apex

FIG. 4.—Left oblique view of the heart and aorta of the same patient as Fig. 3. The arrows indicate the upper and outer limits of the aortic arch and descending aorta. The arrow marked "C" indicates the site of the aortic constriction. The aorta proximal to the constriction is dense and dilated; distal to it the aorta is less dense, narrow, and tortuous. The oesophagus is outlined with barium.

beat, neck, or abdomen forms part of the routine examination of the child. By this means J. W. Brown (personal communication) has recognized coarctation in a child of 2 years of age.

Of the present series all four children had harsh left basal systolic murmurs without detectable thrills. A diastolic aortic murmur was not heard, though regurgitation at the aortic valve is a common finding even in young adults (Perlman, 1944). Similarly, careful search revealed anastomotic vessels coursing over the scapulae in only one patient (Case 1)—a further contrast to a sign common in the adult. The radiological appearances are less distinctive in the child. Considerable cardiac enlargement was present in only one of my four patients (Case 4, Fig. 5). Rib-marking, virtually a pathognomonic sign in the adult, may be absent. The youngest child in this series showed definite "scalloping" of the lower edges of several ribs at age 5; another at age 8 had none (Case 2, Fig. 6);

and the eldest of the series at age 12 had only the slightest indentations, easily overlooked had not the clinical examination already established the diagnosis. In this girl the coarctation was complicated by the presence of a patent ductus. None of the children had symptoms related to hypertension or to intermittent claudication. All were active and outwardly well, though one was a rheumatic child (Case 1) with a well-marked mitral stenosis in addition to the aortic coarctation.

Resection of the Coarctation

Crafoord and Nylin (1945) and Gross and Hufnagel (1945), working independently, now report their respective techniques for resection of the constricted segment of the aorta, which is then reconstructed by a continuous everting silk suture drawing intima to intima. This type of end-to-end anastomosis has proved eminently satisfactory. A year after the aortic repair Crafoord's two patients—aged 12 and 27 years—are in excellent health, with blood-pressure readings in normal proportions between the arms and legs. One of the two patients on whom Gross practised resection of the aortic stricture died. As soon as the clamps were removed from the aorta and the enormous

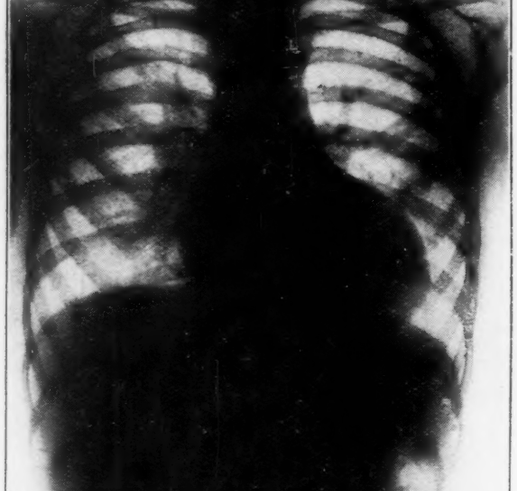

FIG. 5.—Teleradiograph showing coarctation of the aorta in a boy aged 5 (Case 4). Cardiac hypertrophy and the absent aortic knuckle are striking features. Definite notches on the lower edges of several ribs—e.g., the 7th left and 7th, 8th, and 9th right.

vascular bed was in consequence thrown open, the child's heart "suddenly went into uncontrollable dilatation." The second patient reported by Gross—a 12-year-old girl—had the aortic clamps gradually released without incident. Before resection of the coarctation her brachial pressure lay between 215 and 190, with unobtainable readings in the legs. After repair of the aorta the systolic pressure in the arms was 140 and in the legs 145.

In the skilled hands of the thoracic surgeon this operation should not prove any more formidable than the procedure adopted for ligation of the ductus. Experimentally, a large artery such as the aorta heals firmly, intramural clotting does not give rise to difficulty, and Gross and Hufnagel (1945) point out that end-to-end reconstruction of the vessel does not lead to mechanical stenosis; indeed, in the animal the slight eversion of the walls tends to enlarge the internal diameter of the aortic tube at the point of union. Just as in the blind ends of the ligated ductus a smooth channel devoid of crypts is soon formed, so also the reconstituted aorta is lined by a continuous layer of endothelium and the walls heal firmly. In the absence of any local infection the ultimate production of stenosis is as unlikely as aneurysm formation at the site of the arterial wound. Preliminary reports would indicate that the risks are worth taking—at least, when the arteries are young and resilient and the proximal aorta is unencumbered by atheroma, local calcium deposition, or diffuse degenerative changes.

The Cyanosed Child

In the presence of persisting cyanosis an exact anatomical diagnosis is more difficult than in the acyanotic group, the cardiac defects more often multiple, and the child delicate, fragile, and susceptible to infection. In offering a palliative surgical procedure Blalock and Taussig (1945) have made a bold approach to the problem of treatment. By so reconstructing the circulation as to ensure the delivery of a greater volume of blood to the lungs aeration can be enhanced. Impressed by the importance of a diminution in pulmonary blood-flow as a cause of cyanosis in congenital heart disease, those authors report their results in three children, each handicapped by a high grade of Fallot's tetralogy, in whom a major artery, the innominate or subclavian, was anastomosed with the right or left branch of the pulmonary artery. In the tetralogy cyanosis is partly due

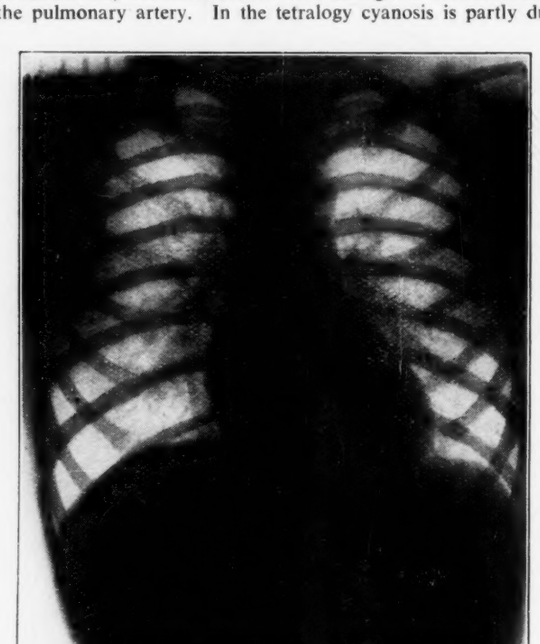

FIG. 6.—Teleradiograph showing coarctation of the aorta in a boy aged 8 (Case 2). Rib-notching is not evident in this patient; cardiac enlargement is less prominent than in Case 4 (Fig. 5). The aortic knuckle is visible but reduced in size.

to the septal defect and partly to pulmonary stenosis. By the surgical production of an artificial ductus the stenosis is bypassed and the volume of blood which reaches the lungs for aeration is greatly increased. As the septal defect persists, with consequent mixture of venous and arterial blood, it is therefore impossible to bring the oxygen saturation of the arterial blood to normal, but the presence of the artificial fistula may permit of sufficient oxygenation to abolish "visible" cyanosis. Clinical improvement in the children has been striking, with distinct lessening of the cyanosis, a decrease in dyspnoea, and an increased tolerance for exercise. Blalock and Taussig emphasize the importance of a full investigation in order to determine as accurately as possible the anatomical lesion. When cyanosis arises from causes other than diminished pulmonary flow the construction of an artificial ductus will not be helpful.

As might be anticipated, the heart enlarges after this operation, the diastolic pressure falls, and the circulatory load is increased. It is therefore possible that benefit may be only temporary, congestive heart failure or bacterial endarteritis of the pulmonary artery being the main danger. As a palliative

procedure this operation has its justifications, but it is questionable if it will appreciably increase life expectancy. It is yet too early to form a final judgment. Further reports on the progress of these children will be awaited with interest.

Summary

Surgery can obliterate the patent ductus arteriosus and eradicate the congenital stenosis of the distal aortic arch known as coarctation of the aorta. The clinical diagnosis of these defects is discussed. The diagnosis of coarctation of the aorta is missed repeatedly in childhood by a failure to palpate the groins as a routine procedure. Feeble or absent femoral pulses make a characteristic finding. An account is given of four children in whom this defect was observed. Diagnosis of these congenital flaws within the first ten years of life is important if full advantage is to be taken of current surgical procedures designed for their correction.

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RESISTANT ANAEMIA

A NOTE ON THE DIFFERENTIAL DIAGNOSIS OF PERNICIOUS ANAEMIA AND FAMILIAL ACHOLURIC JAUNDICE

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The purpose of this communication is to draw attention to the not uncommon error of confounding familial acholuric jaundice (F.A.J.) with pernicious anaemia (P.A.), and to show how that mistake may arise and how it can be avoided. Acholuric jaundice is usually regarded as a rare condition; but we are inclined to think that its supposed rarity is largely due to its being frequently overlooked. During the last fourteen months we have seen no fewer than nine previously undiagnosed cases of acholuric jaundice, each one belonging to a separate family. They were, in fact, numerically in excess of the new cases of true pernicious anaemia with severe anaemia seen during the same period. Among such cases of pernicious anaemia we do not include those suffering from a greater or lesser degree of P.A.-factor deficiency secondary to some other disease such as sprue, carcinoma of the stomach, or liver cirrhosis; nor do we include cases suffering primarily from symptoms of subacute combined degeneration of the cord with a slight or negligible degree of anaemia. Now, of our nine cases of acholuric jaundice no fewer than four had been diagnosed as pernicious anaemia and treated as such for periods up to as long as five years. In a much larger series of cases seen prior to 1940 this same mistake was noted in a somewhat similar proportion; but owing to the loss of part of the card index during the war the details of that series are not available. The present note will therefore refer only to cases seen since October, 1944. Though the series is a small one, the figures we have just given clearly show that the disease acholuric jaundice and the mistake to which we refer are common enough to merit attention.

The Clinical Picture

Clinically, familial acholuric jaundice, with its anaemia and icterus, bears a close resemblance to pernicious anaemia.

Jaundice.—In F.A.J. there is usually slight or moderate icterus, but it may be very marked, and occasionally it is absent. In the latter case a history of one or more previous attacks of yellowness may be obtained. In this connexion one must bear in mind the frequency with which pigment stones occur in F.A.J., giving rise to attacks of gall-stone colic or obstructive jaundice. One of our cases was admitted to hospital deeply yellow as a result of biliary obstruction; and it was only during the routine examination of the blood picture that the underlying cause of the condition was shown to be F.A.J. In another case a cholecystectomy had been performed ten years before on account of two attacks of jaundice and biliary colic; but the significance of the pigment stones which were found was not appreciated.

Splenomegaly.—Sometimes a gross splenomegaly will exclude P.A. and indicate the true diagnosis. But frequently the spleen is not palpable in F.A.J., and very often it is no more easily palpable than in many cases of P.A. In one of our cases showing all the other characteristics of F.A.J. there was no increase in the size of the organ when it was examined at operation.

Ulceration of the Legs.—When there is chronic ulceration of the legs, or a history of such ulceration, in association with anaemia the diagnosis is beyond doubt; unfortunately, leg ulcers probably occur in less than 20% of the patients, though in this short series it was seen in over 40%. The ulcers usually occur at a higher level than those associated with varicose veins, though sometimes they are found round the ankles over the malleoli. Often affecting the middle of the leg, they may lie anteriorly or posteriorly, and tend to spread slowly but remorselessly. They are usually intensely painful and are resistant to all local treatment, although they tend to heal during prolonged rest in bed. Splenectomy, which abolishes all the symptoms of F.A.J., results in the healing of the ulcers in about six weeks.

Family History.—A family history of anaemia, and more particularly of jaundice, or of ulceration of the legs, is very suggestive. Yet often one can obtain no such history even after diligent questioning; while, on the other hand, one must avoid being misled by the not uncommon story that "anaemia runs in the family," and by the fact that occasionally patients with P.A. give a family history in which jaundice as well as anaemia plays a prominent part. One of our patients told us that her brother had died of leukaemia, and another that her mother and brother had succumbed to splenic anaemia. Investigation made it clear that in both these families the deaths had been due to F.A.J. Five out of our nine cases gave a relevant family history.

Periodicity.—Another point which may help in the clinical diagnosis is the story of the periodic nature of the attacks of anaemia and yellowness. This seldom happens in P.A. unless the patient has received intermittent treatment with liver. But so many of the cases of F.A.J. which one sees are in their first "attack" and give no history of previous ones.

Age.—It must be emphasized that the signs and symptoms of F.A.J. often remain latent till late in life. Thus five of our patients were over 50 when their first symptoms appeared, three were over 60, and one was over 70.

Alimentary and Nervous Signs.—Other aids to the clinical differential diagnosis consist in the presence or absence of the signs and symptoms referable to the alimentary and central nervous systems which are so frequently present in P.A. But whereas the history or presence of such signs and symptoms when well marked is highly suggestive of P.A., their absence by no means excludes that disease. It must be remembered that glossitis occurs in many other conditions apart from P.A.; and that "pins and needles" in the hands or feet, which is perhaps the commonest early symptom of subacute combined degeneration of the cord, may be found in any severe anaemia, presumably as the result of peripheral anoxaemia. It is worth noting, in this connexion, that "pins and needles" due to an anaemia *per se* is likely to be perfectly symmetrical in distribution; while a definite asymmetry, with the tingling more pronounced on one side than another, is more suggestive of an organic, and presumably neurological, lesion. It cannot be too strongly emphasized how important it is in every suspected case of P.A. to have a fractional test-meal examination.

If any free acid is found it is absolutely certain that the case is not P.A.—at least, not one of the primary Addisonian type. On the other hand, the absence of free acid, though strongly suggestive of P.A., does not completely exclude F.A.J. Thus in the six of our cases in which it was practicable to carry out a test-meal examination there was an absence of free acid in two.

The Blood Picture

It is not only the clinical picture which may confuse the practitioner, for the haematological picture, at least in its elementary form, may be even more misleading. The reason for this is that most cases of F.A.J. have a high colour index. It is seldom much below unity, it is often well above unity, and it is occasionally higher than in any other disease. Unfortunately, a colour index definitely above unity is popularly regarded as pathognomonic of P.A. or of one of those rare macrocytic anaemias which differ from P.A. only in their failure to respond to liver.

For perhaps the majority of clinicians the blood picture as regards the red cells is complete if a red cell count and haemoglobin estimation are done. These two figures, together with their quotient the colour index, are all the information that is considered. The remarks of the pathologist as to the degree of anisocytosis, anisochromia, poikilocytosis, etc., tend to be regarded as little more than frills to lend some semblance of complexity to an otherwise simple report. A reticulocyte count and a measurement of the mean diameter of the red cells seem to be looked upon as a luxury barely worth the extra trouble. Yet it is chiefly upon these three pieces of information—the mean cell diameter and its relation to the colour index, the appearance of the red cells in stained films, and the reticulocyte count—that the successful differential diagnosis between F.A.J. and P.A. depends.

Colour Index and Mean Cell Diameter.—Whereas the colour index is usually high in both F.A.J. and P.A., the mean cell diameter is generally much increased in P.A. and much diminished in F.A.J. This apparent discrepancy—a high colour index with a small mean cell diameter—is one of the most characteristic points in the blood picture of F.A.J. Usually the mean cell diameter is smaller than in any other condition—often less than 6 μ; yet the colour index is around unity or even above it. Less commonly, the mean cell diameter is only slightly reduced, when the colour index will be well above unity. Finally, in rare cases the mean cell diameter is actually above normal, and then the colour index may reach extraordinarily high values. The reason for this is the spheroidal shape of the cells, which results in their surface area and volume being much larger in proportion to their diameter than is the case with normal red cells, with their comparatively thin disk-like figure. This sort of discrepancy is seen only in F.A.J. In P.A. one occasionally gets a discrepancy in the opposite direction—a large cell diameter with a low colour index—due to a post-haemorrhagic anaemia being superimposed on the macrocytosis. This will happen when there is some incidental cause of blood loss such as haemorrhoids, or when the thrombocytopenia associated with P.A. is sufficiently developed to produce a haemorrhagic purpura.

The Appearance of the Red Cells in Stained Films.—Irregularities in the size, staining, and shape of the red cells tend to be well marked in the majority of severe anaemias. They are absent or but slightly noticeable only in those severe anaemias that are due to an aplasia of the bone marrow or which are associated with toxic or infective processes where there is presumably some general depression of bone-marrow function. Now, while it is fully realized that the extent to which these abnormalities of the red cells are developed gives a rough indication of the degree of marrow activity, it is not usually appreciated that a more subtle analysis of these abnormalities will often supply us with information of the greatest diagnostic value. In particular it is by close attention to the detailed appearance of the red cells in stained films that one most readily avoids the mistake of muddling F.A.J. with P.A. In the majority of anaemias where there is gross irregularity in the size of the red cells there is also great irregularity in their shape, and this is especially true in P.A. But in F.A.J. one of the most striking features is that although the cells have an enormous range in size they are extraordinarily uniform in shape, being almost perfectly circular disks: there is, in fact, gross anisocytosis without poikilocytosis. Again, irregularity in the *depth* of staining of the cells, "anisochromia," is by no means uncommon in severe anaemias. Usually it is what one might call "irregular" in type—that is to say, many of the large cells are pale and many are dark—while the same is true of the small cells. In a typical case of P.A. there is usually little or no anisochromia, all the cells being fairly completely and uniformly filled with haemoglobin. In severe hypochromic anaemias there is again little or no anisochromia; but here the cells are very deficient in haemoglobin and appear uniformly pale. However, in cases of hypochromic anaemia and P.A. under treatment with iron and liver respectively, when the haemoglobin production tends to lag behind the cell formation, the anisochromia often becomes very striking. If there is any tendency towards regularity in the anisochromia of P.A. under treatment, it is that the larger cells tend to be more completely filled with haemoglobin and to appear pinker than the smaller cells. But in F.A.J. the picture is quite different: the anisocytosis and anisochromia are of striking regularity, the great majority of the small cells staining deeply and the large cells palely. *There is no other condition in which this happens*; and usually the appearance is so remarkable that one look at the stained film without any other examination, haematological or clinical, is sufficient to make one extremely suspicious of the correct diagnosis.

Reticulocytes, Stippled Cells, and Diffuse Basophilia.—Although a gross reticulocytosis is in no sense pathognomonic of F.A.J., it is nevertheless a feature which distinguishes absolutely between that disease and P.A. In a severe untreated case of P.A. the reticulocytes are usually not increased above the normal 1 to 1½% of the total red cell count, and they seldom if ever exceed 2 or 3%. In a case of F.A.J. in which the anaemia is severe there is always a gross reticulocytosis: it is usually at least 15 to 20%, and often 40 to 50% or even much higher. One must of course beware of the severe case of P.A. which has recently received an injection of liver, so often administered before the diagnosis is established. Although a high reticulocytosis may occur in any of the other haemolytic anaemias, such as lead-poisoning, and to a less extent after an acute haemorrhage, in hypochromic anaemia under treatment with iron, in certain types of leukaemia, and in leucoerythroblastic anaemia the other haematological characteristics of F.A.J. will be missing, while features peculiar to these conditions will usually be present.

A small percentage of stippled cells are usually to be seen in P.A.; but in F.A.J., though there is a gross reticulocytosis, few if any of these cells appear as stippled cells with Romanovsky stains. Many of the reticulocytes in F.A.J. appear bluish (diffusely basophilic) in the Leishman-stained films. This supplies another feature which may help in distinguishing the disease from P.A. When diffuse basophilia is well developed in F.A.J. as many as 10 or 20% of the cells may have a bluish tint, whereas in P.A. the figure never reaches 1% of the total cell count.

Nucleated Red Cells.—Nucleated red cells are usually present in both P.A. and F.A.J., and may occasionally reach high figures; but the type of nucleated cell is very different in the two conditions. In P.A. these cells are of all degrees of immaturity; in F.A.J. the vast majority of them are late-type cells with solid-looking, structureless nuclei. Moreover, these pyknotic nuclei frequently assume bizarre shapes not often seen in other diseases, being double-lobed, triple-lobed, or even mulberry-like in appearance.

The White Cells.—In F.A.J., when the anaemia is marked, there is usually a polymorphonuclear leucocytosis with a left shift, both of which may be considerable. In P.A., on the other hand, there is nearly always some degree of leucopenia due to reduction in the polymorphonuclears; while among the granulocytes which remain there are not only immature cells, which may include myelocytes and even metamyeloblasts, but also some very large polymorphonuclears with highly complicated lobulation of their nuclei: a shift simultaneously both to left and to right.

In Table I we have summarized the main differences in the blood pictures of F.A.J. and P.A., and in Table II the clinical features of our nine cases of F.A.J.

TABLE I.—*Main Differences between the Blood Picture of Acholuric Jaundice and that of Pernicious Anaemia*

	F. A. J.	P. A.
Colour index	High	High
Mean cell diameter	Low	High
Anisocytosis	Marked	Marked
Poikilocytosis	Absent	Marked
Anisochromia	Marked and regular	Slight
Stippling	Absent	Moderate
Diffuse basophilia	May be gross	Moderate
Reticulocytosis	Extreme	Absent
Nucleated red cells	Late type	All types
White cells	Leucocytosis	Leucopenia

It must be realized that the above remarks apply only to cases of F.A.J. and P.A. which are in an active phase of the disease. In cases of F.A.J. with but a mild degree of anaemia, or which are discovered during the routine examination of an acholuric family, the above characteristics will naturally be less well developed; but even in such cases some or all of them are generally fairly obvious.

Fragility.—So far we have refrained from any reference to fragility of the red cells because we have been concerned only with the more elementary points in the diagnosis. We maintain that the determination of the fragility of the red cells, unless carried out by someone who has considerable experience of the test, is often valueless and not infrequently misleading. It is not always realized that in a considerable proportion of the cases of F.A.J. the fragility of the red cells is only very slightly increased above the upper limit of normal. In one of our nine cases there was a previous report from a reputable laboratory that the fragility of the red cells was normal; while in another the departure from the normal, though recognized, was so slight that its significance was overlooked. As examples of the variability of the fragility from one case to another the following figures from two of our series are illuminating.

TABLE III.—*Showing Different Degrees of Fragility of Red Cells of Fully Oxygenated Heparinized Venous Blood in 2 Cases of F.A.J. compared with the Normal*

% NaCl	H. A.	R. B.	Normal
	% Haemolysis	% Haemolysis	% Haemolysis
0·30	100	100	100
0·35	100	100	100 approx.
0·40	100	100 approx.	60
0·42	100 approx.	—	15
0·44	100 approx.	50	12
0·46	80	20	10
0·48	60	3	Trace
0·50	50	Trace	Nil
0·52	30	Trace	Nil
0·55	20	? Trace	Nil
0·60	10	Nil	Nil
0·65	8	Nil	Nil
0·70	3	Nil	Nil
0·75	Trace	Nil	Nil
0·80	Nil	Nil	Nil

In a satisfactory fragility test it is necessary (1) to make up very accurate solutions of the various saline dilutions; (2) to make certain that the blood is fully oxygenated before introducing it into the saline solutions; and (3) always to carry out a quantitative estimation of the percentage of haemolysis in each saline dilution.

Treatment

From the foregoing description it will be seen that the diagnosis of familial acholuric jaundice, a disease so often unassociated with clinically recognizable jaundice, demands painstaking clinical and laboratory work. The ultimate justification for this labour must be the availability of successful treatment. This is presented in splenectomy. In skilled hands the operation is not hazardous, for the spleen is never bound down by adhesions as in splenic anaemia. Although it is desirable by means of blood transfusion to raise the haemoglobin to a reasonable level before operation, it is sometimes impracticable to achieve this ideal owing to the rapidity of the red cell destruction going on in the body. In such cases, rather than delay too long it is better to operate at a comparatively low haemoglobin level and to give a further transfusion of blood immediately after the operation. It is remarkable how rapidly in most cases the haemoglobin rises when once the spleen is removed. In one of our cases a two-pint (1.14 l.) transfusion of fresh blood raised the haemoglobin only from 40% to 45%; splenectomy was then performed, being followed immediately by the giving of two further pints of blood, and within 24 hours the haemoglobin had risen to 70%.

Summary

The frequency with which familial acholuric jaundice is wrongly diagnosed and treated as pernicious anaemia is emphasized.

The commonest causes of this mistake have been found to be: (1) An unfounded belief in the diagnostic value of the colour index. (2) Ignorance of the fact that free acid in the gastric juice excludes pernicious anaemia. (3) Failure to appreciate the extreme importance of detailed blood examination. (4) Attribution of natural remissions to the effect of liver administration and of relapses to faulty liver preparations. (5) Failure to grasp the importance of chronic ulceration of the legs and anaemia as signs of familial acholuric jaundice.

TABLE II.—*Chief Clinical Features of 9 Cases of Acholuric Jaundice*

Case	Sex and Age	Anaemia (Hb)	Jaundice	Leg Ulcer	Splenomegaly	Pigment Stones	Family History	Previous Diagnosis
N. M.	F. 48	56%	—	—	Spleen not palpable, but large at operation	—	—	Nil
R. B.	F. 19	62%	Obstructive J. + +	—	Slight	+	+	Obstructive Jaundice
J. B.	F. 22	30%	Slight	+ +	Spleen not large at operation	—	—	Obscure anaemia
M. G. B.	F. 41	74%	—	—	Slight	—	+	P.A.
E. H.	F. 63	40%	Slight	+ +	+	+	+	P.A.
L. D.	M. 53	56%	Slight	+ +	+ +	—	+	Nil
H. A.	M. 52	38%	+	—	Slight	—	+	Nil
W. G.	M. 73	42%	+	—	+	—	—	P.A.
E. R.	F. 68	35%	Slight	+	Slight	—	—	P.A.

SPLENIC CYSTS: WITH A REPORT OF A CASE

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Splenic cysts are rare. All writers on this subject begin their articles with these words and go on to quote figures given by Fowler (1940) in analysing 137 cases of non-parasitic splenic cysts.

Andral (quoted by Fowler, 1940) in 1829 described the first splenic cyst, which was found at necropsy and proved to be a dermoid. In 1880 Pean (Fowler, 1940) performed the first splenectomy for a cyst, and in 1906 the first series of 36 cases was described by Powers (Fowler, 1940). Since Fowler's review the interest of surgeons has been aroused, for cases have been recorded in fair numbers. By 1942 McClure and Altemeier had raised the total to 149, and later in that year Gallagher and Mossberger described the 155th non-parasitic cyst. Up to the end of 1944 seven further examples had been listed, and our case would appear, therefore, to be the 163rd.

That the condition is indeed uncommon can be seen by reference to the standard textbooks of surgery and pathology, which have little or nothing to say on the subject. Like most rarities it is of course probable that many cases went unrecorded until more recent years. A search through the literature reveals a willingness on the part of the authors to compose elaborate classifications of these few cases, which discourages us from attempting anything similar.

It is certainly expedient to distinguish parasitic (hydatid) from non-parasitic cysts in the first instance. The former are said to be at least twice as common as the latter. Arce (1941) of Buenos Aires found the spleen affected by hydatid cysts in 3% of his cases, and Dew (1928) that 2% of all hydatids were in the spleen. It is, we think, reasonable to regard the non-parasitic cysts as "true" or "false" according to whether there is an endothelial (or epithelial) lining or merely a connective-tissue lining. It is on the basis of this distinction that Fowler records the ratio of true to false as 1:4; or, as those who prefer percentages would say, only 20% of non-parasitic cysts are true and 80% are false. This distinction, however, may be liable to error, for in certain cases an endothelial layer may disappear as a result of pressure from, for example, haemorrhage; while in others a lining may even be acquired by metaplasia of connective-tissue elements. How often this may happen it is impossible to say, but that it does occur is suggested by the fact that some areas of certain of the cysts described show an epithelial lining and other areas only connective tissue. In this connexion Gallagher and Mossberger (1942) point out that the terminal findings may mislead as to aetiology.

Discussion

True cysts include dermoids and epidermoids and those lined by endothelium. Although it is difficult to explain the presence of ectoderm in the spleen, this is the only source of these tumours. A possible explanation is that they are derived from a primitive totipotential cell capable of producing any of the three layers, such as is postulated to explain the ovarian and testicular dermoids.

Endothelium-lined cysts are easier of explanation and can be accounted for as haemangiomata, lymphangiomata, and serous cysts arising possibly from inclusion of peritoneal cells, together with the multiple cysts associated with polycystic disease of other organs. Lubarsch (quoted by Fowler, 1940) considers that some of the serous cysts may be neoplasms arising from anlagen of lymphatic endothelium.

False cysts are usually large and single, and contain blood or blood-stained serous fluid and often cholesterol crystals. They tend to be situated at either pole of the spleen, with normal splenic tissue elsewhere, and part of the cyst wall may be formed by thinned-out spleen, though Fowler describes cartilage and smooth muscle occurring in the walls. In places the wall may be fibrous. Gallagher and Mossberger (1942) describe a pedunculated calcified cyst attached to the lower pole of the spleen surrounded by normal tissue, and McClure and Altemeier (1942) have observed the occurrence of torsion of the pedicle as a rare event. The cause of false cysts is considered to be trauma or infection, or degeneration in an infarcted area. Malaria is mentioned as a predisposing cause, and we have recently been informed by an R.A.M.C. colleague that in West African natives, in whom malaria is almost universal, splenic cysts are not infrequently found at necropsy. Syphilis and the other causes of splenomegaly may render the spleen liable to exposure to trauma, and if this is associated also with toxaemia it will make haemorrhage all the more probable. The suggestion that splenic congestion occurs during menstruation (Denneen, 1942) and that intrasplenic haemorrhage and cyst formation are therefore more likely in women during the phase of active sexual life is dismissed by Fowler, and there is nothing to support this belief in the textbooks of gynaecological physiology. Seven per cent. of cysts occur during pregnancy (Fowler), but this has probably been a coincidental finding, the presence of the cyst being observed when the uterine fundus begins to encroach upon the upper abdomen. They occur at all ages, but particularly in young adults, and women are rather more often affected than men.

Diagnosis.—When small a cyst will give rise to no symptoms, and when larger it will cause pressure symptoms and very little else; or it will be noticed by the patient or others. Milroy Paul (1943) says "the diagnosis . . . has rarely been made," and Fowler himself uses the same phrase. It is therefore encouraging to read Sweet's (1943) opinion that "large cysts, however, present a clinical picture so characteristic that the diagnosis can be readily made," and to record that in the case to be described the diagnosis was in fact made by one of us (J. A. C.), though the co-author and a considerable number of other medical men scorned his suggestion.

Dyspepsia, a dragging pain, and inability to eat a large meal owing to compression of the stomach are the chief complaints. If inflammation exists pain will be more severe. The past history may be of help in cases of malaria, syphilis, or trauma. Trauma as a cause of splenic rupture and also as a factor in the production of pseudo-pancreatic cyst is well known. But it is easy to visualize an injury which will cause intrasplenic haemorrhage only and result later in the formation of a splenic cyst. Hydatid disease should be looked for in members of stock-breeding communities and its presence confirmed by Casoni's or other specific tests.

If the cyst occupies only a part of the spleen the rest may be palpable, and this will aid in diagnosis. But if the whole organ is involved, or nearly so, it will be necessary to differentiate cysts of the pancreas, left lobe of liver, omentum, kidney, or ovary. The last should be easy, for a spleen seldom reaches the pelvis and an ovarian cyst seldom gets completely out of it, so that if the cyst originates in the spleen one should be able to "get below it." One can usually "get above" a pancreatic cyst, which should be strictly a midline structure, whereas a splenic cyst, unless pedunculated, is never completely below the costal margin and extends across the midline only if it is of considerable size. A palpable notch would be of diagnostic importance, but this has rarely been noted.

Aspiration of the cyst with the finding of cholesterol crystals is cited by Denneen (1942) as an aid to diagnosis, but the dangers inherent in this procedure should the cyst be echinococcal or an aneurysm would seem to weigh heavily against its advantages.

Radiography.—Elkeles and James (1943) state that "in the few cases in which a correct diagnosis was made prior to operation, *x*-ray examination was the determining factor," and certainly it has much help to offer. Where calcification has occurred it is clearly almost diagnostic, for a calcified cystic shadow in the left upper quadrant of the abdomen is likely to be either a splenic cyst or an aneurysm of the splenic artery, and the latter can be excluded reasonably easily by auscultation. This calcification often takes place in spite of the youth of a patient and a short history. Snoke (1943) quotes cases at the ages of 18, 25, 44, 52, and 60. In the absence of calcification a soft-tissue swelling which obliterates the psoas shadow, raising of the left diaphragm, and spreading of the lower ribs are seen. Sweet (1943) draws attention to the fact that the swelling, though generally rounded, often has a pointed lowest extremity where solid splenic tissue remains.

A barium meal will show the stomach to be pushed across to the right and compressed backwards, and the splenic flexure to be displaced downwards and to the right according to the size of the tumour. Intravenous and retrograde pyelograms have shown the kidney to be pushed downwards (cases quoted by Fowler, 1940; Roberson, 1940; Elkeles and James, 1943; and Sweet, 1943) or upwards (cases quoted by Shawan, 1933, and Snoke, 1943).

Treatment.—There is no doubt that splenectomy is the proper treatment unless prevented by the presence of dense adhesions. Fowler puts the mortality at 4%. Enucleation has been practised on occasion, but there is a danger of haemorrhage from this procedure. Marsupialization and incision and drainage are apt to be followed by fistula and amyloid disease, not only in hydatid cysts but in non-parasitic ones as well (Arce, 1941). There seems little doubt that emptying the cyst makes removal easier, provided infection and hydatid are excluded.

Case History

A girl aged 24, a member of the W.A.A.F., unmarried, was found at a routine medical examination to have a huge swelling in the upper abdomen. She had always been "plump," but the swelling had been present to her knowledge for only 10 years. A vague story of injury to the lower left ribs four years previously was dismissed as probably of no importance. The swelling had gradually increased in size and had given rise to dragging abdominal pain only during the last few months, in which period she had noticed that she had had to be content with small meals, as she readily became "blown out." Questioning failed to elicit any other symptoms incriminating the digestive, urinary, or genital systems. She had not noticed any shortness of breath.

Examination was equally unhelpful except for the swelling itself. This was well defined and clearly cystic, and occupied the whole of

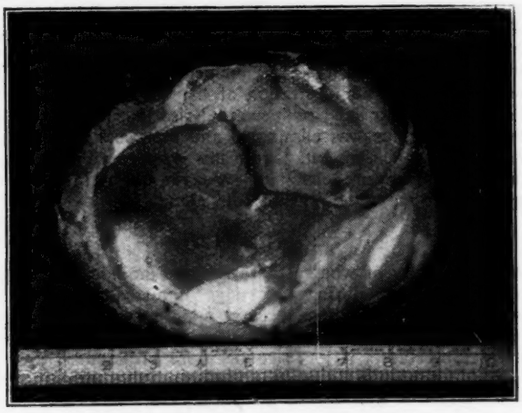
the epigastrium. It lay slightly obliquely across the abdomen, the left side being lower than the right, but the axis was horizontal rather than vertical. Below, it reached to the level of the umbilicus, but was not palpable in the loin or left renal angle. No notch was felt. Its lower edge was well defined, and it was agreed that the cyst could be moved slightly up and down but not from side to side. It was dull to percussion, silent on auscultation, and displaced the gut downwards. The liver was not enlarged and no other abnormal physical signs were detected. A plain skiagram showed the shadow of a large soft-tissue swelling, and a barium swallow demonstrated that the stomach was pushed away to the right and also compressed backwards. Blood count and urine examinations were normal.

A diagnosis of pseudo-pancreatic cyst was made, with a minority report in favour of splenic cyst as previously mentioned. It was considered that a renal origin for this swelling could be safely excluded.

Operation (Aug. 10, 1945; Air Vice-Marshal Stanford Cade).—It was decided to explore through a left paramedian incision, cutting across the rectus muscle to gain extra space if necessary. On opening the peritoneum a shining rounded tumour of a beautiful duck-egg blue was seen, and it was thought that the first diagnosis was correct. But further exploration showed this to be a large round area of fibrous cyst wall, the remainder of the tumour being typically plum-coloured splenic tissue, thinned out over the cyst and forming a margin of grossly normal spleen to the right and below and including the notch. The latter had not been palpable clinically because it lay beneath the right costal margin, so far did the spleen extend across the midline.

An incision was made through this thin fibrous area and about 3½ litres of fluid removed by sucker. This fluid was brownish, opalescent, and of the consistency of dish-water. The cyst collapsed and, with the division of a few adhesions and the pedicle, was easily removed through the original incision. The peritoneal cavity was mopped dry and the wound closed without drainage. Convalescence was uneventful. Six weeks later a barium meal showed a stomach of normal size, shape, and position. The patient was symptomless and had returned to duty.

The Specimen.—The cyst, together with the fluid removed, weighed approximately 13 lb. (5.85 kg.). The wall was leathery, and it was easily distended again for the purpose of fixation, though not to its original size. The photograph indicates the present size, the circumference being 24 in. (60 cm.) in its long and 21¼ in. (54 cm.) in its shorter axis. The fluid contained red blood cells and polymorphs, some degenerate but mostly recognizable. Numerous cholesterol crystals were seen and culture was sterile. In places the wall was purely fibrous and translucent: in others a layer of spleen about 1 cm. thick was stretched over it. The interior of this single cavity showed massive trabeculation and a considerable quantity of necrotic fibrinous tissue adherent to the walls.



On section the "sandwich" effect of a layer of spleen enclosed between a thick fibrous capsule on the outer side and a less thick fibrous lining on the inner side was well seen. The latter was not limited by any specialized epithelial or endothelial cells. A section through "normal" splenic tissue taken from the anterior margin of the cyst showed increased fibrosis but no other abnormal change.

Skiagrams taken before operation showed compression and displacement of the stomach, which state of affairs had righted itself six weeks later.

The literature is reviewed and differential diagnosis considered.

The specimen has been accepted by the Royal College of Surgeons.

[NOTE.—Since going to press further sections have been cut and show that in places the cyst was lined by flattened endothelium. Patchy calcification was seen here and there. It is considered that these appearances are not inconsistent with the description of the cyst as "false."]

Summary

A case of false splenic cyst of considerable size in a young woman is described.

The size of the cyst was out of all proportion to the symptoms.

A pre-operative diagnosis was made and the condition was successfully treated by splenectomy.

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SIGNIFICANCE OF THE PREMENSTRUAL FEVER IN PULMONARY TUBERCULOSIS

BY

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In recent years pulmonary tuberculosis has been diagnosed by radiography, to a greater extent than ever before, at a stage when no abnormal physical signs are present. Once the diagnosis is made, the next step is to determine whether the disease is active or not. In many cases admitted to sanatoria investigation shows only healed scars. Serial skiagrams, however, reveal definitely whether the lesion is active or not, but these changes take some time to declare themselves. In 1921 Sir James Kingston Fowler wrote that "the temperature is the guide to the activity of the disease." But many cases which on admission to sanatoria appear to be afebrile, in that their temperature never rises above 98.4° F., prove later to have a natural maximum temperature of only 98° F. or even 97.8° F., so that the early readings really represent a mild degree of pyrexia.

The Present Investigation

In this connexion there arises a question of great importance—namely, the significance of the premenstrual temperature in women. If the temperature increases, does the increase indicate tuberculous activity, or can it be disregarded in considering increases in patients' exercise? In an attempt to elucidate this problem 15 normal healthy young women were persuaded to take their temperature as controls, both morning and evening, for ten minutes in the mouth, as is done in recording the patients' temperatures in this sanatorium. This was done for at least one whole menstrual cycle. Van de Velde (1904, 1929) first showed that in the normal woman the body temperature is relatively low during the first and relatively high during the second half of the menstrual cycle. Barton and Wiesner (1945) have confirmed, by taking the waking temperature, that a relatively high temperature is characteristic of the premenstrual phase, and that it persists after conception. Such a diphasic change was found in 13 of the 15 normal women studied, and the temperature reached a steady maximum beginning a few days before menstruation was due. The reactions were of three types. First, a rise in both the morning and the evening temperatures; secondly, a diminution in the daily variation, usually caused by a rise in the morning temperature; and, thirdly, a combination of these two changes—i.e., a rise in temperature as well as a diminution in the daily variation. The changes fell with almost equal incidence into these three groups. The average duration of this premenstrual change in the temperature was 5 days. The highest temperature reached was in no case above 99° F., and this occurred in only one instance. In 75% of cases the premenstrual temperat showed no readings above 98.4° F.

Of 50 women of child-bearing age with pulmonary tuberculosis premenstrual changes occurred in 43. The reactions were of the same three types as occurred in the controls, and the incidence of each type was the same. The average duration of these changes, however, was 9 days instead of 5, and in 53% the temperature reached was 99° F. or over. As soon as the menstrual flow started the temperature reverted to its previous character.

In 6 of these patients the characteristic changes were absent when a temporary increase of tuberculous activity occurred. During this exacerbation, shown either by a higher temperature recording or by a bigger variation in the morning and evening temperatures, the premenstrual phase invariably disappeared. When the toxaemia decreased the phase reappeared. Table I

TABLE I.—*Showing Effects of Variation of Toxaemia (indicated by Periods grouped a, b, c) on the Premenstrual Phase*

Case	Daily Intermenstrual Temperature Variation (° F.)		Duration of Premenstrual Change in Days	Temperature Variation during Premenstruum (° F.)	
	a.m.	p.m.		a.m.	p.m.
I	(a) 98·4	100·0	Nil	98·4	100·0
	(b) 97·4	98·2	9	98·0	98·4
II	(a) 97·6	98·8	12	98·4	100·8
	(b) 98·0	99·8	Nil	98·0	99·8
	(c) 98·0	99·4	4	98·4	101·0
III	(a) 98·0	99·0	Nil	98·0	99·0
	(b) 98·0	98·6	10	98·4	99·0
IV	(a) 98·0	98·4	2	98·6	99·2
			3	98·8	101.0
	(b) 97·0	99·4	Nil	97·0	99·4
V	(a) 97·8	99·0	Nil	97·8	99·0
	(b) 97·2	98·2	11	98·0	99·0
VI	(a) 98·0	99·0	Nil	98·0	99·0
	(b) 97·4	98·4	7	98·0	98·8

records the daily variations in temperature and the premenstrual changes in these 6 cases, and shows how, at times when the temperature variations were greater owing to increased toxaemia, the premenstrual change disappeared. Martin (1943) has shown, by examining endometrial biopsies, that absence of a premenstrual variation in temperature is due to ovulation not having occurred. Tuberculosis is recognized as a cause of amenorrhoea, and it would appear that in the 6 tuberculous cases which did not show a premenstrual temperature change, once the toxaemia reached a certain level, there was a tendency to swamping of the endocrine changes, but without actual amenorrhoea ensuing.

Another of the 43 patients possessed charts, extending over a period of five years, showing an original premenstrual rise in temperature lasting for 14 days; now, when the degree of activity of the disease is much less, the rise lasts for only 5 days. In another patient there has been a gradual diminution in the duration of the premenstrual change and in the maximum temperature reached, until finally it has vanished completely.

Seven of the 50 patients showed no premenstrual change at any time. In one of these cases, with a temperature variation of 99 to 100.6° F., there was amenorrhoea. In the other 6 toxaemia was present but the temperature range was comparable to that of 5 patients who did show a reaction (Table II).

TABLE II.—*Showing the Similarity in Temperature Range in Patients with, and without, a Premenstrual Variation*

Case	Patients showing no Premenstrual Change		Patients with Similar Temperature Swing but showing Premenstrual Change				
	Daily Temperature Swing (° F.)		Daily Temperature Swing (° F.)		Duration of Change (days)	Premenstrual Temperature (° F.)	
	a.m.	p.m.	a.m.	p.m.		a.m.	p.m.
1	97·8	99·2	98·0	99·0	5	98·4	99·2
2	98·0	99·2	98·4	99·2	8	99·0	99·6
3	97·0	99·0	98·0	99·0	12	98·4	99·4
4	98·0	99·0	99·0	100·0	5	98·4	101·0
5	98·0	99·0	98·2	99·2	8	99·2	100·2

One woman had had amenorrhoea for five years. In spite of this a regular change in her temperature occurred every 28 days, lasting for 10 days. After spinal analgesia for an appendicectomy she had one period lasting 2 days. This occurred on the day that her temperature was due to come down, and did so, just as it does in those women having a premenstrual change. A dilatation and curettage had been done four years previously, but unfortunately no microscopy was carried out at that time. Sharman (1944) investigated 883 cases of primary sterility and found that 5.3% had tuberculous endometritis; so it appears that subclinical tuberculosis of the female genital tract is a not uncommon cause of sterility. It would seem that in this case the endocrine changes associated with menstruation occurred, but it is surmised that the endometrium could not react to the hormonic stimulation.

The elucidation of the premenstrual change is not easy. Occasionally it is accompanied by some increase in the number of rales and crepitations which can be heard in the chest, and this would point to there being an increase in the activity of the disease. In 4 patients the day preceding menstruation was marked by a sudden extreme rise in temperature, the evening maximum being 1.6 to 2.6° higher than usual. This reaction bears a strong resemblance to a tuberculin reaction, and it would appear that in these patients there had been a sudden flooding of the blood stream with tubercle toxin.

The symptoms of which many women complain during the few days preceding menstruation are very similar to those of over-activity of the thyroid gland—e.g., irritability, sweating, tremor, and nausea. It appeared, therefore, as if the thyroid might be in some way implicated in this change. In an attempt to settle this point thiouracil was administered in 6 cases chosen from the above series as showing a reasonably constant monthly cycle. Thiouracil inhibits over-activity of the thyroid by preventing conversion of available iodine into the thyroid gland hormone (Franklin *et al.*, 1944; Rawson *et al.*, 1944). Thiouracil had been previously tried in the treatment of tuberculosis and found to have no effect. This was not unexpected, since estimations of basal metabolism in tuberculous patients generally show a normal standard figure independent of activity, extent, or type of lesion (Kayne *et al.*, 1939), but it was thought that the reduction in cardiac output brought about by thiouracil might be beneficial. The drug was given in a dosage of 0.6 g. daily, starting on the first day of temperature change. No noticeable change was produced, but it is known that in thyrotoxicosis there is a lag period before the drug exerts its action. When the administration of the drug was started two days before the expected premenstrual rise in temperature, the temperature change was eliminated and the usual concomitant symptoms were also absent. From this it appears that the premenstrual temperature change is brought about in the final stage by over-activity of the thyroid gland.

Conclusions

In the majority of women there is some modification of the temperature chart during the days immediately preceding menstruation. This change occurs in pulmonary tuberculosis in early, as well as in advanced, cases. In patients with pulmonary tuberculosis it tends to be more pronounced and of longer duration than in normal subjects. This premenstrual phase gradually diminishes in conjunction with decreasing tuberculous activity. As an indication of activity it can be regarded in the same light as a persistently raised erythrocyte sedimentation rate, and may be ignored in deciding increases of exercise. The change is probably brought about through the agency of the thyroid gland, and can be abolished by the use of thiouracil.

I wish to thank Dr. Dennison Pickering, medical superintendent, for permission to publish this paper and for his interest, advice, and criticism; also Dr. Elsie Watchorn, of the Biochemical Laboratory, Cambridge, for help in obtaining a number of the control temperature charts; and Genatosan Ltd. for a supply of thiouracil.

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BLINDNESS IN AN URBAN CENTRE IN NIGERIA

BY

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In Sept., 1944, a census of all blind persons was held in Yerwa, the chief town of Bornu Province, Northern Nigeria, in order to ascertain the percentage of blind persons in the community and so far as possible the cause of this blindness. Up to the present time it is believed that no figures have been published relating to the incidence of blindness among West African natives, and although the present series is not large it is probably representative of other urban centres in Northern Nigeria which have a similar climate and in which the same diseases are prevalent.

Yerwa is a town of approximately 35,000 persons, situated in the north-eastern corner of Nigeria and at the southern edge of the Sahara Desert. The climate is intensely dry during the greater part of the year and dust storms are very common. The average annual rainfall of 25 inches falls chiefly in three months (July to September), with slight showers between April and June and in early October. As a rule no rain falls in the remaining five months of the year.

The figures for the total number of blind persons were computed by the local Native Authority, and may be taken as fairly accurate but probably slightly below the correct figure. It was noticed during the examinations that on two occasions the ward head produced more males or females than had been declared in his ward, and also that only three children below the age of 12 years were brought for examination. It is probable that a certain number of cases of blindness in young children have been concealed, for, as will be seen from Tables II and III, 37% of all persons examined had become blind before the age of 10 years.

Owing to administrative difficulties it was not possible to examine all the blind persons in the town. Slightly more than 50%, however, were examined, including a representative number of both sexes and of all age groups except young children. The results of the census are summarized in six tables.

TABLE I.—*Incidence of Blindness among the Community. (Figures given by the Native Authority)*

Ward	Population	Number of Blind Persons		
		Male	Female	Total
Shehuri North	—	52	42	94
Shehuri South	—	30	89	119
Zongo	—	3	7	10
Bulabulin	—	19	26	45
Hausari	—	17	17	34
Fezzan	—	11	9	20
Mafoni	—	62	101	163
Gambaru	—	6	6	12
Totals	34,425	200	297	497

The disparity of the number of blind persons among the different wards is due partly to variations in size between the wards, but chiefly to the degree of proximity between the ward and the chief market. It will be seen that the incidence of blindness among the community is approximately 1.4%, but it is certain that this is an under-estimate, and the correct figure is probably between 2 and 2.5%. In any case it is considerably lower than the figure (5%) given by Rosset Berdez for South African natives.

TABLE II.—*Present Age of All Blind Persons Examined*

Age Group	Male	Female	Total
0–10	1	0	1
11–20	21	8	29
21–30	26	24	50
31–40	38	25	63
41–50	26	18	44
51–60	24	10	34
61–70	14	9	23
71–80	6	4	10
All ages	156	98	254

TABLE III.—*Age at Onset of Blindness*

Age Group	Cases	% of Total
0–5	61	24·1
6–10	34	13·3
11–20	61	24·1
21–30	27	10·6
31–40	24	9·4
41–50	14	5·5
51–60	17	6·7
61–70	13	5·2
71–80	3	1·2
All ages	254	—

In Tables II and III the ages are only approximate, for the average native has no reliable means of knowing the date of his birth. The majority, however, are able to refer the date of their birth to some contemporary historical event, and in consequence the approximations are probably not greatly in error.

TABLE IV.—*Causation of Blindness in Infancy (Age Group 0–5 Years)*

Causal Disease	Cases
Conjunctivitis	29
Smallpox	31
Other causes	1

Of the group of persons who became blind before the age of 5 years (Table IV) many were not certain whether they became blind within a few weeks of birth or later, but none could ever remember seeing. If all these cases of conjunctivitis, however, are classed as ophthalmia neonatorum the proportion of cases due to this cause would be 11.4%, as compared with 6.2% in the Counties of London and Middlesex, recorded by Sorsby (1945). In view of the very septic conditions which prevail at childbirth in this part of Nigeria and the very high incidence of venereal disease, it can safely be assumed that this is not an under-estimate. With regard to the incidence of venereal disease in this area it is of interest to note that during the four years 1941 to 1944, inclusive, venereal disease accounted for between 35 and 40% of all new patients attending the Bornu Native Administration Hospital.

TABLE V.—*Causation of Blindness in All Age Groups*

Causal Disease	Cases
Conjunctivitis: leucoma	59
" panophthalmitis	44 } 103
Smallpox	103
Penetrating wound of the globe	2
Glaucoma	10
Cataract	25
Infantile cataract	1
Cerebrospinal meningitis	3
Other causes	7
Total	254

The high proportion of cases which occur as a complication of smallpox (Table V) is in accordance with the findings during the epidemic of this disease between November, 1943, and February, 1944. During this period it was noticed that almost every severe case of smallpox developed a very severe conjunctivitis, although there were not necessarily pocks on the conjunctiva itself. With energetic treatment very few of these developed any serious after-effects. Medical facilities in Bornu are, however, in their infancy, and it is reasonable to suppose that a high proportion of these cases would have become blind in the earlier days, when treatment was not available.

Many cases of severe conjunctivitis admitted to the hospital for treatment and which respond only with difficulty to routine measures are in fact cases of keratomalacia due to a vitamin A deficiency, which is very prevalent. These cases respond rapidly when vitamin A is given.

Owing to the overwhelming number of cases in this series due to either conjunctivitis (including keratomalacia) or smallpox, it is not possible to draw any conclusions as to the relative importance of hereditary and developmental defects from small number which remain.

TABLE VI.—*Occupation or Means of Subsistence of Blind Persons*

Occupation or Means of Subsistence	Male	Female
Rope-maker	37	—
Water-seller	1	—
Corn-grinder	—	3
Grass-seller	1	—
Tanner	1	—
Well-digger	1	—
Muezzin	1	—
Telephone switchboard operator	1	—
Begging	83	75
Maintained by relatives	30	20

Many of the men who stated that their occupation was rope-making (Table VI) also said that they did not earn enough money at this trade, and resorted to begging as a subsidiary means of subsistence.

Summary and Conclusions

The results of a census of blind persons in a typical urban centre in Northern Nigeria are described and classified. The series is small, but it is thought that similar results would be obtained from a census taken in other urban centres in the same area—and there are many such centres. The incidence of blindness given in this census is 1.4% of the population, but owing to concealment in young persons it is thought that the true figure may be nearer 2.5%.

It is believed that at least 80% of the cases of blindness could be prevented by widespread compulsory vaccination satisfactorily performed, education with regard to both the purpose of vaccination and a more suitable dietary vitamin A or its precursor, and by a multiplication of the existing medical facilities to ensure that all cases of conjunctivitis receive adequate treatment. The problem of venereal disease, which is almost universal in this Moslem community, is one, however, to which there is as yet no solution.

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Medical Memoranda

Severe and Long-standing Headache due to Dental and Antral Infection

The following is a case of long-standing headaches showing fairly classical symptoms of migraine, which was allergic in character. The patient's trouble seems to date back to his dental sepsis, only part of which was removed by dental extractions, residual infection persisting in the spongy bone which used to house the roots of the teeth and which formed the floor of the antra. His headaches increased in frequency and severity after edentulation. The curtain of mucosa dividing the right antrum into two compartments was probably cystic and of dental origin, and was capable of becoming very oedematous, shutting off ventilation from the normal ostium. It would suggest that the bacterial allergy had some influence on the vasomotor control of the intracranial membranes and became a strong contributory factor to the headaches.

CASE HISTORY

The patient was a gardener aged 60. Intermittent headaches began 30 years ago while serving in the Army during the war of 1914–18. He was discharged from the Service as unfit on account of these headaches, with the diagnosis of migraine. While in the Army he had several dental extractions, but without any relief from the headaches. On returning to civil life these continued, and he had all his teeth removed. They were, from his account, definitely carious.

For some years after their removal he still experienced a sensation of toothache in he gums. As time went on the headaches became more frequent and more severe, until he was having two or three each week. The attacks began during the night and continued for 24 to 36 hours. The pain usually started in the cervical and occipital regions, reaching upwards and forwards to the temporal region, where it became localized. The pain was always more severe on the right side, and he described it as a severe thumping sensation: when he put his head down on to a pillow it felt as if it were being bumped up and down, and he says he felt that if only a hole could be bored through he would get relief! His case was investigated at several of the London hospitals, with the same diagnosis—migraine—and he was advised that little could be done for him.

When I examined him in February, 1945, he felt he could not go on much longer. He appeared distressed and fatigued. On a full clinical examination nothing was found to account for his symptoms. His sinuses and alveoli were *x*-rayed. There was a large shadow in the right antrum suggesting a polypus, with some thickening over the floor of the left antrum. Further *x*-ray films were taken, this time after displacement with lipiodol; these showed a very irregular filling of the right antrum and a moderate degree of thickening of the mucosa over the floor of the left antrum. No swelling of the mucosa was noted upon the posterior wall of the antra. Other sinuses appeared normal. The alveoli of the upper jaw showed a marked osteoporosis.

It was decided to explore both antra, and he was admitted to hospital, where a large sublabial incision was made on both sides, exposing the upper part of the alveoli and the antero-lateral wall of the antra. When the right antrum was opened a pale oedematous curtain of mucosa was seen stretching from the roof to the floor of the antrum, dividing it into two compartments. This was removed and the normal opening of the antrum was explored and found to be patent. The whole of the mucosa was stripped from the antrum and a considerable amount of the cancellous bone forming the floor of the antrum was removed. A naso-antral opening was made and the wound stitched with fine silk.

The mucosa in the left antrum was thickened, with a moderate degree of polypoid degeneration. The mucosa and the polypi along the floor were removed together with the bone forming the floor and part of the alveolus. A naso-antral opening was made and the wound stitched with fine silk.

The patient made an uninterrupted recovery and was discharged from hospital within ten days. Since he was operated upon he has been entirely free from headaches, and remarks that his head now feels much lighter.

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Bilateral Cryptorchidism in Three Brothers

I have had little opportunity of going deeply into the literature of cryptorchidism, but, so far as I can gather, there has been no recorded case of its occurrence in three brothers. The following instance may therefore prove of interest.

CASE HISTORIES

In 1944 a father brought his son, then aged 10, to see me, saying that he appeared to have something wrong with his scrotum. I examined the boy, and found no evidence of testicles in the scrotum or inguinal canals. He had never felt any pain in either inguinal region. No other abnormality was discovered, and he was otherwise healthy. He was treated with pregnyl without result. Some months later his mother brought a younger brother, aged 7, to me, as she thought he needed circumcision. While examining him I noticed that his scrotum was empty and there was no trace of testicles in the inguinal canals. No other abnormality was found, and he was quite healthy. He was subsequently circumcised, but his cryptorchidism still remains. I knew there was a third brother, aged 5, and I rather jestingly said to the mother that perhaps it would be as well if I had a look at him also. She brought him to me next day, and in his case too there was no evidence of testicles in the scrotum or inguinal canals. There was no other abnormality, and he was quite healthy. The mother and father of the boys are normal and healthy, and I cannot find that there has ever been cryptorchidism in either of their family histories. They have no other children.

At the end of January, 1945, the eldest boy was admitted to Harefield County Hospital under the care of Dr. Reginald Lightwood, where he remained until March 10. While there he was treated with injections of antuitrin S rising from 1 ml. to 3 ml., given twice weekly—a course of 12 injections in all. At the time of his discharge there was no evidence of the descent of either testicle. I very recently examined the three boys again, without finding evidence of testicles in scrotum or inguinal canals of any of them.

So far as my own experience goes, bilateral cryptorchidism is very uncommon, although I have seen a few cases of the unilateral variety. Thorek (1924) puts the incidence at 1 in 500, stating that the condition is usually unilateral. Gallagher and Brouha (1944) found the condition in 0.5% of high-school boys. Thompson and Hechel (1941) had 25 bilateral cases in a series of 62. Williams (1936a, 1936b) found 1.8% of unilateral and 1% of bilateral cases in a series of 2,104 boys. In view of the correspondence recently appearing in the *B.M.J.* under the heading "Descent of the Testis," the condition of these three brothers would seem to be of especial interest and to bear out the contention of Mr. A. W. Badenoch (1945) that "the descent, therefore, of the testis is almost entirely due to hormonal influence." I am indebted to Dr. Reginald Lightwood for having treated the eldest boy at Harefield, and to Mr. George Bonney, who furnished me with the references quoted.

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Reviews

PHYSICAL DIAGNOSIS

Physical Diagnosis. By Ralph H. Major, M.D., Professor of Medicine in the University of Kansas. Third edition. (Pp. 444; 457 illustrations. 25s.) London: W. B. Saunders Company. 1945.

This is probably the most attractive textbook of physical diagnosis on sale at the present time. It is not too large, is beautifully produced, and is illustrated with a magnificent collection of photographs. Some of these delight us by the skill with which a typical picture has been caught, as in the photograph of Buerger's disease. Others are impressive by the clever photographic technique, as, for example, the whole series of pictures of the lips, tongue, and teeth. Pictures make such a lasting impression on the beginner that it is perhaps a pity that haemochromatosis is depicted in a woman when it is so much commoner in men. Another commendable feature is the reproduction of illustrations from the original accounts of disease and the numerous historical notes. If we might venture a criticism, it would be to doubt whether this and similar books adequately represent the practice of to-day. Physical diagnosis developed in the age of therapeutic nihilism, when physicians spent their time in the wards eliciting physical signs and explaining them by rather dubious principles of physics, and when these wards contained numerous cases of valvular disease of the heart, aneurysm, and advanced tuberculosis. Unless he is interested in the art purely for art's sake, we cannot imagine a modern physician looking for Litten's sign of diaphragmatic paralysis. It seems also a little unbalanced to devote so many pages to the heart and lungs, and so few to structures like the joints, the sciatic nerve, and the peripheral circulation. The student of to-day will see much more hypertension and arteriosclerosis than endocarditis, and he will, we hope, learn to diagnose pulmonary tuberculosis at an earlier stage than that of Hippocratic succussion and the *bruit d'airain*. There is, in fact, a place for a textbook of physical diagnosis more suited to this neotechnic, geriatric age. But let us make no mistake about it: it would have to be very well done indeed to be as attractive a book to the student as Prof. Major's.

TUBERCULOSIS—AS A WHOLE

A Manual of Tuberculosis: Clinical and Administrative. By E. Ashworth Underwood, M.D. With an introduction by Prof. J. R. Currie, M.D. Third edition, largely rewritten. (Pp. 524; illustrated. 15s., plus 7d. postage.) Edinburgh: E. and S. Livingstone. 1945.

Whenever the clinician meets with a case of pulmonary tuberculosis, or even some other chest disease, he is unpleasantly reminded that the condition in the unfortunate patient has a background. Tuberculosis is a disease of chronic causes, its origin has often to be guessed, and its social environment is extremely important. Many books on "chest diseases" give confident descriptions of pathology, physical signs, and treatment. But few are capable of sketching this wide hinterland which often dwarfs the mere clinical problem. Dr. Ashworth Underwood's manual may be warmly recommended. Its description of the scientific basis of the disease is full enough for the medical student, the nurse, or the social worker, and the latter sections dealing with management are even more useful. We are taken rapidly through collapse therapy, orthopaedic manifestations, and laboratory methods, and there is a satisfactory account of the routine of the tuberculosis dispensary with all its social implications. Rehabilitation is given adequate pages, and there is a useful glossary and list of recommendations for further study.

It is much more difficult to conceive and carry out a small book like this than a large tome. Every writer knows that compression plus lucidity is a result most difficult to achieve. The author has succeeded, and this book can be welcomed both for its own virtues and as a sign of the times. The teaching to undergraduates of the whole theory and practice of tuberculosis control is much behind the necessities of to-day. The old-fashioned point of view which began with the physical signs and ended with a pneumothorax refill has to be replaced by a much larger conception. While Dr. Underwood does not claim that environment is more important than the individual patient's disease, he does make clearly evident the relation between the two. If only for its lesson that the tuberculosis physician must take total views this book is to be welcomed.

A POST-WAR TEXTBOOK OF PUBLIC HEALTH

Textbook of Public Health (formerly Hope and Stallybrass). By W. M. Frazer, M.D., D.P.H., and C. O. Stallybrass, M.D., D.P.H. Eleventh edition, revised and enlarged. (Pp. 571; illustrated. 25s., plus 7d. postage.) Edinburgh: E. and S. Livingstone. 1946.

It is six years since the tenth edition of the standard textbook on public health, by Frazer and Stallybrass, has been issued, and it is now out of print. A new edition is therefore valuable for the new student. The eleventh edition has been revised and brought up to date in two ways: much of the ephemeral wartime stuff has been omitted, and a good deal of material has been added, notably a chapter on the social services.

A book published immediately after the war cannot escape certain defects. It has difficulty in striking a just balance between the old and the new, and in assessing the relative importance of tendencies in legislation and in practice. The immense changes in political structure since the end of the war and the effects of a national health service on public health administration cannot yet be fully estimated; and perhaps it is only right that this textbook should deal with the things that are established. Speculation would have been out of place in a work of this kind. Nevertheless one feels a sense of disappointment, almost amounting to frustration, in the lack of reference to such measures as the Education Act, 1944, and the legislation on behalf of disabled persons. It will take time before the new trends in thought and action can be really incorporated in a standard work. Meanwhile we should welcome a useful and comprehensive textbook which may well mark the dividing line between the duties of the medical officer of health under forthcoming legislation and those assigned to the medical officers of the new regional authorities for medical care.

A SURVEY OF NUTRITION

Dietotherapy: Clinical Application of Modern Nutrition. Edited by Michael G. Wohl, M.D. With foreword by Russell M. Wilder, M.D., Ph.D. (Pp. 1,029; 93 illustrations. 50s.) London: W. B. Saunders Company. 1945.

This book is a symposium on nutrition by 58 different contributors, all of whom are authorities in their respective fields. It is not, as its title might suggest, a treatise on dietetics, but an up-to-date and wide survey of nutrition from the biochemical, dietetic, and clinical aspects. The titles of the chapters range from oxidative enzymes to the nutrition of factory workers. It is clear that with such a wide range of interest each chapter needs to be written by an expert.

The book is divided into three parts. In Part I, which deals with normal nutrition, the role of various nutrients, including vitamins and trace elements, is discussed. Part II is devoted to nutrition in infants and the aged, in pregnancy, and in relation to infection. Part III deals with the dietetic treatment of disease. Deficiency diseases are included in the chapters on vitamins, which occupy about a sixth of the book. There are also chapters on amino-acid therapy, nutrition in industry, nutrition and income, and the care of the surgical patient. Useful features of the book are summaries and bibliographies at the end of the chapters and a comprehensive index of 43 pages.

Though the advice given on the dietetic treatment of disease is perfectly sound it cannot be followed at present on this side of the Atlantic, not even in the blackest of black markets, as many of the foods are not obtainable, either at all or in the quantities mentioned. However, this is not a reflection on the book but on the food situation in this country and Europe. Part III of *Dietotherapy* will be even more useful when we have a greater quantity and variety of food.

The literature on nutrition is scattered throughout many publications in several unrelated fields of knowledge, and the general reader has the greatest difficulty in keeping abreast of it. The critical and authoritative reviews in this book contain up-to-date information on those aspects of nutrition likely to be of interest to the general medical reader, particularly on the prevention and treatment of disease. The editor and the many contributors are to be commended on the production of one of the best collections of reviews on the clinical applications of nutrition so far published in book form. *Dietotherapy* should be in the hands of all who are interested in nutrition.

SPINAL INJURIES

Traumatismes de la Moelle et des Racines. Sciatique Traumatique. By R. Thurel. (Pp. 76; illustrated. 75 francs.) Paris: Masson et Cie. 1944.

Injuries to the spine may occur in peacetime as well as in war, and this complete review of their diagnosis and treatment in a brief monograph is certainly useful. Such injuries are dealt with in respect of immediate results and late effects. All such wounds require early surgical attention, and, if the cord is only partially destroyed or the lesion affects the cauda equina care should be exercised to relieve all pressure. Late results call for laminectomy and removal of foreign bodies, but also for care in readjusting vertebral dislocations or displacements. The chief interest of the book will be found in the excellent discussion of root sciatica. The author considers that, if the root pain is chronic or recurrent, surgery is always called for. Having excluded bone, joint, or arterial disease, he uses diagnostic novocain injections, and then, since laminectomy is in his opinion indicated, he always injects lipiodol, preferably by the suboccipital route. Most cases are found to be due to displaced disks or herniated nuclei, but some are due to hypertrophy of the yellow ligament, or to adhesions following arachnoiditis, which can be divided. In severe cases the posterior root of L 5 or S 1 may be cut. The sections on diagnosis and surgical technique are admirably clear and the whole discussion will amply repay study.

Notes on Books

Bulletin No. 8 of the Department of Labour and National Service, Australia (39 pp.) deals with *Factory Planning: Part 1. Some Aspects affecting Working Conditions.* It contains the pooled experience and ideas of a considerable number of Australian manufacturers, engineers, and architects, and relates more especially to industrial buildings designed and erected during the war years. The first section describes natural lighting, artificial lighting, and colour of walls, machines, etc. The second section relates to natural and mechanical ventilation, and to heating and air-conditioning. The effect of climate, which differs so widely in various parts of Australia, is also discussed. The third section of the Bulletin considers the lay-out, construction, and equipment of factories, and, like the rest of the Bulletin, it is most excellently illustrated. Copies may be had from the Department of Labour and National Service, 37, Swanston Street, Melbourne.

The third edition of Dr. D. A. RHINEHART'S *Manual of Roentgenographic Technique* (Henry Kimpton; 28s.) is unchanged in its general plan, but includes some new material and illustrations. It is a pity that the author did not take the opportunity to use modern apparatus in the illustrations indicating technique. The universal Coolidge tube in a lead-glass bowl was in vogue twenty-five years ago. The book, which contains a good but elementary account of *x*-ray technique generally, may be found of use by student radiographers: it is not sufficiently full to be of much interest to radiologists and is too technical for clinicians, but the fact that it has reached a third edition proves that it supplied a need.

Histoire de la Science, a volume of 820 pages, is the work of a French scientist, PIERRE ROUSSEAU, who has set himself the task of collating the world history of science down the ages. Science, the daughter of sorcery, was born about the year 4000 B.C. in the region of South Mesopotamia on the Persian Gulf. Many thousands of tablets recording Sumerian observations were made of soft clay, which was then baked. Using at first simple numerals, the Egyptians and Babylonians later evolved algebra. The next step was in Ancient Greece, where mathematics and geometry appeared. M. Rousseau takes us from the time of Archimedes to the scientific revolution of the 19th century and the contemporary activities of Crookes, the Curies, and Rutherford. Einstein's relativity and also atomic energies are reviewed and explained. The author concludes his work with an appeal for the continuance of pure science and disinterested research. He decries scientists who limit their work to utilitarian ends, and in doing so recalls the early experiments of Volta and Ampère, which, though limited at the time, contained the germs of modern electrical technique. This book is an elaborate and useful work for those who are interested in science in all its aspects. It is published at 148 francs by Librairie Arithmème Fayard, 18, Rue du Saint-Gothard, Paris.

The American Group Therapy Association announces the publication of a *Bibliography in Group Therapy*. The work consists of four sections: (1) bibliography in group therapy, (2) group psychotherapy in the armed Services, (3) symposia, (4) books. The bibliography can be obtained by writing to the Association at 228, East 19th Street, New York 3, N.Y. The price of it is stated to be 40 cents.

Preparations and Appliances

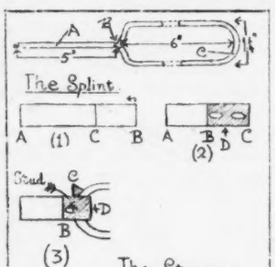
FACIAL SPLINT FOR TREATMENT OF BELL'S PALSY

Dr. J. P. PRACY writes from Barnet:

Treatment of patients with seventh-nerve paralysis by the strapping system described by Pickerill and Pickerill[1] has revealed certain disadvantages in the method. The strapping rapidly becomes dirty in the atmosphere of modern cities. It is rather unsightly and has a tendency to work loose, and male patients wearing it find shaving difficult if not impossible. The method has worked well apart from these disadvantages, and to overcome them while still employing the principle of traction on sound rather than paralysed muscles a splint has been evolved.

DESCRIPTION

The instrument is an elongated racket-shaped loop of copper wire (14 S.W.G.). It is covered with thin rubber tubing. The "handle" of the racket (A) is 5 in. (12.5 cm.) long and the loop (C) about 6 in. (15 cm.) long and 1¼ in. (3 cm.) wide. The apparatus is easily made from a single length of copper wire about 18 in. (46 cm.) long. The joint at B is soldered, but in the first two models made it was simply twisted and apparently worked satisfactorily.



METHOD OF APPLICATION

This will be clearly seen in the drawing. The splint is bent to fit the individual patient's face as follows. The elongated sides of the loop are first bent in the centre, and applied to the upper and lower jaws. The handle is then applied to the affected side of the face, and the end hooked round the pinna of the ear. The end of the loop on the good side of the face is secured with a small piece of strapping, and the unaffected side is drawn over to the affected side before the strapping is stuck.

It has been found that by using eyelet holes and a collar stud in the strapping the splint may be readily removed for the purposes of washing, shaving, and the application of electrical stimulation. However, the splint should otherwise be worn at all times and only removed for the specific purposes mentioned above.

The strapping is prepared as follows. A 4¼-in. (11.5-cm.) length of 1/2-in. (1.25-cm.) strapping (AB) is cut off—see (1) on diagram—1½ in. (4 cm.) at one end (BC) is folded back on itself, stuck, and two small eyelet holes cut in it, leaving 1¼ in. of adhesive to stick to the face—see (2). The end C is then taken through the loop of the splint—see (3)—and the stud passed through each of the eyelet holes in turn.

To remove the splint the stud has merely to be taken out, and the strapping remains in exactly the correct position when the splint is replaced. It is easy to take up any slack in the splint by bending rather more of the handle round the pinna on the affected side.

I would emphasize that the good side should be pushed over to the affected side when securing the small piece of strapping initially. Furthermore, considerable traction can be obtained by this method, and care should therefore be taken that too much is not applied.

[1] *British Medical Journal*, 1945, 2, 457.

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NORTHERN IRELAND'S ANTITUBERCULOSIS LEGISLATION

Northern Ireland, which in recent years has considerably enlarged its institutional provision for tuberculosis, is setting about the combating of this scourge by preventive and protective measures. A Government Bill has been introduced into the Northern Ireland House of Commons which is modestly described—modestly in view of its far-reaching character—as a Bill to make better provision for the prevention and treatment of tuberculosis. It goes much further than the tuberculosis schemes which have been operative in Great Britain since the Astor departmental committee of thirty or more years ago. In the first place a tuberculosis authority, a body corporate, is to be set up for the whole country. This body will have the duty of making provision for the accommodation and treatment of tuberculous persons, for the detection of cases, and for the prevention of the disease by educational and other methods, including courses of instruction for medical students, doctors, and nurses. The authority will be able to purchase or lease land and acquire or construct buildings to be used as hospitals, sanatoria, dispensaries, clinics, health centres, occupational colonies—as may be necessary. It will maintain and educate tuberculous children or children who have recovered from tuberculosis, or children who have been in contact with infectious cases in their homes. Another of its duties will be to train people in methods of detecting, preventing, and treating tuberculosis, and to that end testing apparatus and equipment and maintaining laboratories for research. Again, the authority may contribute to the support of any association for training nurses or to any benevolent association in line with its purpose. The authority to which such wide powers are to be given will consist, as to the majority of its members, of nominees of the local authorities—four from the Belfast and one from the Londonderry county borough councils, two from each of the county councils of Antrim and Down, and one from each of the four other county councils. In addition there will be four other members nominated by the Minister of Health and Local Government, and it will be possible to co-opt one or two further members. The members are not to be paid any salary or fees, but only reimbursed their expenses. There are provisions in the Bill for the transfer of people engaged at present in tuberculosis work in the local authorities.

Whenever a medical practitioner intimates to the authority that a person exhibits symptoms indicating any significant tuberculous condition that person may be called upon to be examined medically for the purpose of diagnosis. If a practitioner becomes aware that a patient whom he is attending is suffering from tuberculosis he must send a certificate to the authority (for which there is to be a prescribed fee) within 48 hours; similarly, if he signs a death certificate in the case of a death from tuberculosis, and if the deceased had not previously been certified, he must again notify the authority. Failure to make these notifications will mean a fine up to £5 for the first offence and up to £25 for a second or subsequent one.

The authority will have power to require any person living in habitual contact with a person suffering from tuberculosis to be examined by a medical officer. It can also apply to a court of summary jurisdiction for an order to detain any person suffering from tuberculosis of the respiratory tract should he be in an infectious state and should his home circumstances be such that proper precautions are not or cannot be taken. If the court is satisfied it may order the person to be kept in a hospital or institution for not more than three months, and the period may be renewed if the same conditions still obtain. The medical examination which the court may require before proceeding to exercise its powers of detention may be by any medical practitioner, not necessarily the nominee or employee of the authority. The authority is responsible for the cost of the removal and maintenance of the person and, if necessary, for the maintenance of his dependants. If during the period of detention his condition improves, so that there is no longer serious risk of infection, or if his home circumstances become such as to permit the necessary precautions to be taken, he may be at once released from institutional control.

The Act is to be called the Public Health (Tuberculosis) Act (Northern Ireland), 1946. It will repeal the Tuberculosis Prevention Act, 1913, and most of the earlier Act of 1908, as well as parts of the National Health Insurance Acts. In the title of the Bill "other chest conditions and other orthopaedic conditions" are mentioned, but there is no reference to them in the clauses; all the provision is against tuberculosis. It will certainly be an interesting experiment to watch as applied to a community of something over one and a quarter million people who were once described by a British Prime Minister as "without exception the toughest, most dominant, most irresistible race that exists in the universe at this moment."

FOLIC ACID FOR BLOOD DISORDERS

For over two years folic acid has been the subject of investigations which looked as if at any moment they might result in a major therapeutic advance. In October, 1943, Daft and Sebrell[1] described the successful treatment of granulocytopenia and leucopenia in rats with crystalline folic acid. They produced agranulocytosis by feeding the rats on a diet containing 1% sulphaguanidine or sulphasuxidine. This constituent reduced bacterial activity in the intestine and therefore reduced the formation of substances essential for nutrition. As a result, after a variable length of time (30–122 days) there was a reduction in the leucocyte and particularly in the granulocyte count. It may be noted that the diet contained thiamin (B_1), pyridoxine, riboflavin,

[1] *Publ. Hlth. Rep. Wash.*, 1943, **58**, 1542.

calcium pantothenate, nicotinic acid, choline chloride, and biotin. When the leucopenia was established, four days' administration of folic acid raised the white count from a mean figure of 2,700 to 14,400 per c.mm., and the percentage of granulocytes from 1 to 39. This was the first discovery. It was a result of observations that leucopenia was cured in the rat by concentrated extracts from liver, the preparation of which suggested that the substance stimulating leucocyte production might be the growth factor for *Lactobacillus casei*[2]; this was later named folic acid.[3] When folic acid was crystallized,[4] therefore, it became possible to test and establish the suggestion.

There has been, however, another direction in which folic acid has become a substance of great interest. Its crystallization led to its identification with vitamin B_c—an anti-anaemia factor for the chick.[4] The outcome of the indication that folic acid was concerned not only with the production of the white cell in the bone-marrow but also with the production of the red cell is that Spies[5] has recently described the successful treatment of macrocytic anaemia with folic acid. Spies has been working in the southern part of the United States at a centre he established in Alabama, where severe malnutrition is still relatively common. As far back as 1930 he observed that many with pellagra suffered from a macrocytic anaemia exactly like a pernicious anaemia, except that there was no achlorhydria. This nutritional macrocytic anaemia was not due to lack of Castle's intrinsic factor, for the gastric juice of these patients, when incubated with meat, caused a reticulocytosis in patients with pernicious anaemia. Spies therefore began, at Birmingham in Alabama, to hunt for the missing nutritional factor. His centre derived financial support "particularly through large grants from the Research Corporation of New York and the Eli Lilly Company of Indianapolis." After the identification of folic acid with the anti-anaemia factor in the chick, Spies must obviously have had a keen interest in supplies of folic acid. But its extraction from liver, yeast, and other sources results in a poor yield, and only its synthesis could make possible sufficient supplies for testing. Spies's paper begins: "In August, 1945, the synthesis of folic acid (*L. casei* factor) was announced by sixteen investigators (Angier *et al.*[6]). The following month Spies, Vilter, Koch, and Caldwell[7] reported the results of the first clinical use of synthetic folic acid in the treatment of macrocytic anaemia." Was ever such perfectly timed co-operation between the chemists of the manufacturing firm and the clinical team? This represents a very high degree of research organization. The results are that out of 42 cases of macrocytic anaemia 26 responded to administration of folic acid, and of these five were patients with Addisonian pernicious anaemia. This effect of folic acid in pernicious anaemia is of the greatest interest, and suggests that the position of Castle's intrinsic and extrinsic factors will require reconsideration. Among the other patients successfully treated were 8 with sprue, in whom not only did the anaemia disappear but the liquid fatty stools turned to solid brown faeces.

Since the investigation is going on in the United States, we may expect that future developments will not be long delayed. The pace there is very hot. In the meantime we may ask, "What supplies of folic acid are likely to be available in this country?" They may not be urgently required for treating pernicious anaemia or for nutritional macrocytic anaemia, since we have remedies for the former and the latter does not occur in a population which eats meat. Sprue is, however, not uncommon among returned soldiers, and undoubtedly if folic acid is a remedy for agranulocytosis that alone provides a demand for it. Actually the relation of folic acid to agranulocytosis is not so clear to-day as it seemed in 1943, for Daft, Kornberg, Ashburn, and Sebrell[8] have described anaemia and agranulocytopenia in rats deprived of pantothenic acid. While they say that "the granulocytopenia, when unaccompanied by anaemia, probably was a sign simply of an *L. casei* factor (folic acid) deficiency," some doubt remains in the reader's mind whether a fall in granulocyte count will always be due to lack of folic acid alone.

It is to be hoped that British manufacturers are paying full attention to the production of folic acid, despite this uncertainty. Their task is not made easier by the strange fact that those announcing the synthesis in the pages of a scientific journal do not describe how they have achieved it.

PROLONGING PENICILLIN ACTION

In a patient with functionless kidneys a few hundred units of penicillin would suffice to produce an ample therapeutic concentration in the blood. That it is necessary to give doses enormously greater than this is due to the fact that the normal kidney excretes it far too rapidly for therapeutic convenience or economy; the average time spent by each molecule of penicillin in the circulation has not been calculated, but it is probably less than fifteen minutes. There are three reasons for trying to prolong the effect of each dose, and three principal methods of doing it. The reasons are economy, which is a rather less pressing motive than it once was; convenience, particularly in treating the ambulant patient with gonorrhoea or syphilis; and the patient's comfort, particularly if he is severely ill and in need of prolonged sleep. One method of securing a prolonged effect which is far from serving the needs of economy is to give an enormous dose, as practised by Lourie and others[9] in the treatment of syphilis. A second is to obstruct renal excretion. Nephritis or other severe renal damage has this effect, and abnormally high concentrations of penicillin have been observed in the blood of such patients receiving ordinary doses. Delayed excretion can be secured by the simultaneous administration of diodrast or para-aminohippuric acid. Although the use of the latter has been studied extensively, it does not appear to have achieved therapeutic popularity. The third possible method is to secure slow absorption from the site of injection. A special example of this is to inject the whole of the daily dose into a large abscess cavity, thus producing both a local and a systemic effect. M. E. Florey and N. G. Heatley[10] found that after injection of 120,000 units into an empyema a bacteriostatic concentration persisted in the blood for 24 hours. When injections are given in the usual way, some degree of prolongation of effect has been claimed for subcutaneous as compared with intra-

[2] *J. Bact.*, 1940, **39**, 173.
[3] *J. Amer. chem. Soc.*, 1941, **63**, 2284.
[4] *Science*, 1943, **97**, 404.
[5] *Sth. med. J.*, 1945, **38**, 781; *Lancet*, 1946, **1**, 225.
[6] *Science*, 1945, **102**, 227.
[7] *Sth. med. J.*, 1945, **38**, 707.
[8] *Publ. Hlth. Rep. Wash.*, 1945, **60**, 1201.
[9] *Lancet*, 1945, **2**, 696.
[10] Ibid., 1945, **1**, 748.

muscular injection,[11] the addition of vasoconstrictors to the solution,[12] using 5% glucose instead of saline as the vehicle,[13] and applying an ice-bag to the site of injection.[14]

More popular and promising than any of these proceedings is the incorporation of penicillin in solid form in a beeswax–peanut oil mixture, as first advocated by Romansky and Rittman.[15] From a considerable number of subsequent papers it has not been altogether clear how effective this proceeding is, but the latest information appears conclusive. When calcium penicillin of a high degree of purity is employed, 300,000 units can be suspended in only 1 ml. of peanut oil containing 4.8% of beeswax: this greater concentration apparently makes for slower absorption. A single 1-ml. dose of this material injected intramuscularly was found by W. M. M. Kirby *et al.*[16] to produce an assayable blood level for from 8 to 24 hours, but the results were somewhat erratic, and slower and more regular absorption followed subcutaneous injection: 14 out of 25 patients so treated had an assayable blood level continuously for 20 hours or more. There is a minor practical disadvantage: this material is exceedingly viscous, and even after warming can be forced through a needle only with difficulty. For the simplified treatment of venereal disease this is evidently the best method yet evolved, but it calls for a relatively large dose—even 600,000 units per injection has been used in the U.S.A. in order to produce a full 24-hour effect—of highly purified penicillin. It would be interesting to know how soon the supply position in this country will justify extravagance for the sake of convenience.

TOXICITY OF THIOURACIL

The Americans show great enterprise in organizing the collection of evidence on particular points. The latest example of this concerns the toxicity of thiouracil, and the evidence has been compiled by F. D. Moore.[17] He has succeeded in getting details of toxic symptoms from ten distinguished medical centres in America and also from University College Hospital in London. The total number of patients treated with thiouracil in these centres has been 1,091, among whom there were 19 cases of agranulocytosis, 5 being fatal. These were in high probability deaths due to thiouracil. The term "agranulocytosis" was used to mean a conjunction of depressed granulocyte count with infection, usually around the neck, throat, and floor of the mouth. The majority of these cases occurred between the fourth and eighth weeks of treatment. While the death rate from agranulocytosis in the whole series was thus 0.5%, there was leucopenia without concomitant infection in 3%, counting as leucopenia a fall in the white cell count to less than 3,000 per c.mm. Himsworth says that experience at University College Hospital shows there is indeed some fall in the leucocyte count in nearly every patient if care is taken to determine the count before treatment begins. Treatment with thiouracil was continued in some of the patients with leucopenia, but in the majority it was stopped; the white count then recovered. In 5% of patients there was drug fever, and in 5% enlargement of lymph nodes or of the parotid glands.

Information on this subject is not confined to the compilation just described, for, oddly enough, in the same journal van Winkle and his colleagues[18] have been awake in the same direction. They offer a survey of 5,745 cases treated by 328 clinicians. While it can be said that this investigation has not been confined to such established centres as the first, the conclusions are similar and more detailed information is given. Thus there were 21 deaths from agranulocytosis due to thiouracil, indicating a death rate of 0.4%. These investigators were able to examine the incidence of granulocytopenia in relation to the dose of thiouracil, and found that the percentage of patients showing granulocytopenia was independent of the dose. When 0.1–0.4 g. per day was given 2.8% developed granulocytopenia; when 1.0 g. or more was given 2% developed granulocytopenia. A good many patients showed leucopenia without a fall in the granulocyte count; others showed the reverse. This might suggest that leucopenia and granulocytopenia are unrelated, but actually the incidence of both in one patient was 6.5 times as great as it should have been if the conjunction was due to chance. Drug fever occurred in 2.7% of patients and skin reactions in 3.3%. Urticaria was the commonest. A poll was taken on the question, "Is the incidence of toxic reactions to thiouracil greater or less than complications of present methods of treating hyperthyroidism?" The result is interesting: 78.6% said "less," and only 4.2% said "greater"; the others had no opinion. Evidently four out of five American doctors think thiouracil is a good remedy. The authors state that granulocytopenia should be treated by massive doses of penicillin (500,000 units per day).

Another aspect of this second report deserves mention. The survey was the result of co-operation between six drug manufacturers and the Food and Drug Administration, and the report was sent to the Council on Pharmacy and Chemistry of the American Medical Association. The secretary of the council, in a note, urges manufacturers to "show a similar spirit in other therapeutic problems of common interest."

INDUCTION OF OVULATION IN WOMEN

It was clearly demonstrated about twenty years ago that extracts and implants of the anterior pituitary could bring about follicle-ripening, ovulation, and corpus luteum formation in the smaller laboratory animals. It seemed then that the application of these discoveries to the human being would be comparatively simple and needed only a gonadotrophic preparation of high potency. This early optimism faded as it was realized that the pituitary–gonad relationship is both complicated and delicately balanced. Even now it is difficult, and often impossible, to induce the human ovary to ovulate. The earlier efforts to do so were made with chorionic gonadotrophin, and were unsuccessful. It is now fairly well established that the effect of this substance by itself on the human and monkey ovary is to depress follicular activity. For anovular menstruation some workers have tried "oestrogen shock" therapy, giving a large dose about the twelfth to the fourteenth day of a 28-day cycle, in the hope of precipitating ovulation—a treatment not without some theoretical basis. When a potent preparation of a follicle-stimulating gonadotrophin (from pregnant mare's serum) became available, the hopes of the clinicians were raised again. However, it seems doubtful whether ovulation can be produced by this hormone acting alone, unless it is administered intravenously. Hoffman[19] concludes that ovulation in the lower animals, in primates, and in human beings depends on: (*a*) follicle-stimulating hormone applied in correct amounts for an

[11] Schneider-Green, J. E., and Houston, J. M., *J. R.A.M.C.*, 1945, **85**, 234.
[12] Parkins, W. M., Wiley, Marjorie, Chandy, J., and Zintel, H. A., *Science*, 1945, Feb. 23, p. 203; Fisk, R. T., Foord, A. G., and Alles, G., ibid., 1945, Feb. 2, p. 124.
[13] Armstrong, C. D., Halpern, R. M., and Cutting, W. C., *Proc. Soc. exp. Biol.*, N.Y., 1945, **58**, 74.
[14] Trumper, M., and Hutter, A. M., *Science*, 1944, Nov. 10, p. 432.
[15] *Bull. U.S. Army med. Dept.*, 1944, Oct., p. 43.
[16] *J. Amer. med. Ass.*, 1945, **129**, 940.
[17] Ibid., 1946, **130**, 315.
[18] *J. Amer. med. Ass.*, 1946, **130**, 343.
[19] *Female Endocrinology*, 1944. W. B. Saunders Company, Philadelphia and London.

adequate time to promote full ripening of the follicle; (*b*) the addition of luteinizing gonadotrophin at the moment when the follicle is ripe, the liberation of the ovum being dependent on a synergic action between the two gonadotrophins present in a proper proportion; and (*c*) the presence in the ovary of follicular systems capable of responding to these stimuli. This latter is important in practice. In many cases of ovarian underactivity associated with amenorrhoea the supply of pituitary hormones is not deficient; it is the ovaries which are refractory, and in such cases gonadotrophic hormone therapy can hardly be expected to be effective.

Most workers now use a combination of gonadotrophic principles when trying to induce ovulation in women. Some employ a mixture of chorionic gonadotrophin and a pituitary extract containing what is described as "synergic factor" (although this may be only follicle-stimulating hormone which acts synergically). Others prefer to copy what appears to be the natural cycle, injecting follicle-stimulating hormone during the first phase of treatment and chorionic gonadotrophin during the second. Among the advocates of this latter technique is Prof. E. C. Hamblen, who began this type of treatment in 1939, and together with C. D. Davis has now reviewed[20] the results obtained during a five-years trial of what he calls the "one-two cyclic gonadotrophic therapy." After full preliminary investigations, including hormone assays and endometrial biopsy, 116 patients with "hypofunctioning ovaries" were given ten daily injections of 400 i.u. serum gonadotrophin followed by ten daily injections of 500 i.u. chorionic gonadotrophin. To minimize the possibility of the development of an antagonistic factor or "antihormone" an interval of at least one month was allowed between two courses of treatment. The effect was judged by clinical response and by biopsy. Of 7 cases of delayed puberty, only 1 showed evidence of having ovulated after treatment, but 5 responded by uterine haemorrhage; none continued to menstruate when treatment was withheld. The menstrual irregularity continued in 14 patients suffering from infrequent and scanty periods, but 4 of them ovulated during the course of treatment. A positive response was obtained in 15 out of 31 women who had prolonged and excessive anovular haemorrhage. Half of the 14 patients who had regular but anovular menses associated with sterility ovulated, and 4 of them became pregnant, during treatment. The last group of 50 patients were apparently ovulating but showed evidence of defective progesterone stimulation of the endometrium; 9 of them became pregnant during treatment. Hamblen and Davis conclude that patients who suffer from "hypoestrinism" show a poor response, but patients having anovular ovarian cycles without "hypoestrinism" respond well; 44.8% of these showed evidence of corpus luteum formation after treatment. When pregnancy occurred the time of conception seemed to indicate that ovulation took place within 24 to 48 hours of starting injections of chorionic gonadotrophin. These results are encouraging. Nevertheless, failure to ovulate is not necessarily a permanent state, and spontaneous cure is always possible. A secretory reaction in the endometrium, or the occurrence of pregnancy, may not be related to the treatment. Finding signs of ovulation at laparotomy shortly after the administration of gonadotrophin does not permit a definite conclusion that one is the effect of the other. Hamblen's work will have to be repeated on a larger scale and by many independent workers before it can be claimed that a reliable method for inducing ovulation has been found. A good deal of evidence will be required to offset the sobering reports of, for example, Geist, Gaines, and Salmon,[21] who carefully investigated 91 cases in which the ovaries were available for study after treatment with hypophysial, equine, and chorionic gonadotrophins, in various combinations; in every case they failed to find evidence of ovulation which could be unquestionably attributed to the treatment.

[20] *Amer. J. Obstet. Gynec.*, 1945, **50**, 137.
[21] Ibid., 1941, **42**, 619.

THE BLACK HOLE OF CALCUTTA

In June, 1756, the army of Siraj-ud-daula besieged the city of Calcutta. A small band of the defenders, including civilians, with women and children, remained in Fort William, where on June 20 they were overpowered and made prisoner. That night they were shut in a small guardhouse from 8 p.m. When the guardhouse was opened at 6 o'clock next morning only a few survivors emerged. About 146 persons were incarcerated in the "Black Hole," and of these 123 perished. One contemporary writer refers to the victims as being "suffocated"; another says they were "miserably smuthr'd by the Heat occationed by so many being shut up in so small a Place as to be oblig'd to Stand upon one another"; while yet another writes of the prisoners as dying "overheated and for want of water." Forty or fifty years ago standard works on hygiene ascribed the deaths to the "very impure air," but the view of Sir Leonard Hill that the cause of death was heat-stroke is now generally accepted. Macdonald Critchley has recently delved into the available records, and has made a close study of climatological and architectural data, as well as of the symptoms of the sufferers given in the original accounts. His observations form a most interesting paper.[1] The Black Hole was 18 ft. by 14 ft. 10 in. (5.5 by 4.5 m.) in plan and 18 ft. (5.5 m.) high, so that the floor space was about 2 sq. ft. (1,858 sq. cm.) and the air space 33 cub. ft. (0.9 cub. m.) per person. The walls were thick, and there were only two windows, each about 15 in. (38 cm.) square. The windows opened on to a piazza 12 ft. (3.65 m.) wide, so they were much sheltered from any breeze there might have been. The "incident" occurred on the night before the monsoon broke, and from the records of recent years it can be assumed that the maximum day temperature was about 90° F. and the minimum night temperature about 79° F.; the relative humidity would approach 90%.

Dehydration and heat exhaustion are each dismissed as unlikely to have been the cause of death. Discussing asphyxia as a possible cause, Critchley recalls the disaster of the Bethnal Green tube shelter in 1943, when 171 persons lost their lives. The coroner's verdict was "asphyxia due to suffocation by compression," and in the original records of the Black Hole there is much evidence of compression of the bodies of many of the victims, and especially of the thorax. With only 2 sq. ft. (1,858 sq. cm.) of floor space per person any agitation, panic, or struggle to reach windows must have been highly dangerous. The weaker victims, as the records show, collapsed and were trampled on, as they were in the fire at Coconut Grove, Boston, in 1942. But asphyxia due to compression does not explain the physical and mental agitation and deliria which were striking features in the Black Hole episode. It may be that there was also asphyxia due to deprivation of oxygen or poisoning with CO_2, and consideration of a survivor's narrative suggests that of these anoxia is the more likely.

Mr. C. N. Davies, who contributes a physical analysis of the conditions within the Black Hole, supports the view that heat-stroke, from heat generated by the victims themselves, was the most likely cause of death. Excess of carbon dioxide may have been a contributory factor, but the calculations suggest that oxygen lack was not severe.

[1] *J. roy. nav. med. Serv.*, 1945, **31**, 158.

REHABILITATION OF FORCES NEUROSIS PATIENTS TO CIVILIAN LIFE

BY

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In May, 1945, a unit was formed at Mill Hill Emergency Hospital* and sent to the Southern Hospital, Dartford, to prepare for the admission of neurotic ex-P.O.W.s requiring hospital treatment. In the four months June to October, 1945, we admitted 750 such patients. Treatment measures developed at Mill Hill during the five years of war were continued, and several trends were developed further. The unit here consists of 7 separate blocks each containing 50 beds. The staff comprises 9 doctors, 1 vocational psychologist, 1 full-time disablement rehabilitation officer (D.R.O.) of the Ministry of Labour, 1 psychiatric social worker, 1 occupational therapist, and 45 female nurses. The average stay in hospital is six weeks, and only a very small percentage of patients stay a longer or shorter period than this. To date approximately 85% of our patients have been discharged from the Army Category E. Most of the cases were referred to us by the Army psychiatrists of the 45th Division, who handled the psychiatric problems of the 100,000 British repatriates from the European theatre.

Work Therapy

On arriving here our plan was to carry out psychiatric treatment along orthodox lines, but modified to meet the special needs of P.O.W.s. It seemed to us that men who had been segregated in prison camps for up to 5 years would, above all, need help to overcome lack of confidence in their ability to succeed in some job in civilian life. It was decided to try to enlist the help of the working community of Dartford, a town with a peacetime population of 35,000. The manager of the local office of the Ministry of Labour gave every possible help, and by addressing the local Rotary Club and making personal contact with employers, etc., we have built up 41 different outside employments (offering work to a total of 251 men) from which patients may choose. The Ministry of Transport provides three buses, which carry the men to and from work. The emphasis is always on treatment, and the employers show a high sense of social responsibility, trying in every way to help the men to recover their confidence, and not concerning themselves with the actual work output. The men, who are not paid, work for one or two periods of two hours; they are never used in any skilled capacity, but are given an understanding of the whole working of the factory or shop, and simply help where needed or in some department which interests them. If the work does not interest them, or the vocational psychologist recommends a change and their doctor is satisfied that this is desirable, changes may be made once a week. A card index of all the patients and their employment, with the numbers in the various occupations, is kept up to date daily to facilitate changes. The range of choice includes farming, dairy farming, market gardening, building, garage work, various big engineering firms, foundry work, agricultural engineering, shipyard, paper mills, chemical factory, printers, clerical work, and numerous small shops. The big factories offer many specialized jobs—e.g., electrical maintenance, heating, progress, print-room, shipping office, etc.—and the whole programme gives a well-proportioned choice of occupation, representing a fair cross-section of any small community. The patients are visited at their various employments by the vocational psychologist. One nurse is employed full time, going round the places of occupation, straightening out any difficulties with the employers, reporting to the doctor in charge, and noting any absentees. This nurse is one of the most important cogs in the whole machine.

Selection

On the day of admission each patient is interviewed by the doctor in charge and a rough assessment made of his state of health, previous work record, and suitability for occupation. Intelligence tests (progressive matrices and vocabulary) are carried out in every case. If the patient is too ill to work outside the hospital he is recommended for handicrafts, carpentry, or gardening within the hospital, selection in such cases being postponed till such time as he is well enough to begin work therapy; the great majority, however, start at once. If the patient has a trade or occupation to which he intends to return after release from the Army, then, so far as is possible, he is placed in an occupation similar to his own. If he does not wish to continue his pre-war occupation, or has no definite trade or occupation to return to, he is referred to the vocational psychologist; he is given appropriate tests, and work therapy is recommended on the basis of the man's own preference, aptitude, and intelligence. This early assessment is to some extent modified by the availability of certain jobs on the labour market—e.g., a man with no particular mechanical ability as judged by aptitude tests, who has done only vehicle maintenance work in the Army, and who expresses a wish to work as a fitter in a garage in civilian life, is made to realize that as demobilization proceeds there will be an inevitable flooding of the market with men much more highly qualified than he; if he still persists in this particular aim he may be advised to try, say, agricultural engineering; if willing he can be placed in such a firm, and the idea put to practical test, while still in hospital. The psychologist takes a close interest in the various employments available to our patients, visiting them frequently, and the limited use of vocational tests is greatly enhanced by this opportunity of seeing the men actually at work; he does not hesitate to recommend frequent change of employment if this seems to be indicated.

Of the 750 patients interviewed so far, 381 intended to return to their former occupation on release from the Army, 173 had a job to return to but intended to seek other employment, 191 had no job waiting for them (56 of these were in the Regular Army before the war), 3 had never been employed, and two were still studying when called up.

Placement

We have been very fortunate in having the full-time services of a disablement rehabilitation officer of the Ministry of Labour. Patients who are likely to be recommended for discharge from the Army see him during their first two weeks in hospital. At the "assessment interview" the D.R.O. investigates fully the man's past work record and discusses his future plans; if necessary he will write to the local office of the Ministry of Labour in the man's home town for information regarding local conditions, etc.—e.g., the local brewery may have been bombed, and what are the prospects for the firm's old employees? There is a second interview ("placement interview") during the patient's last week in hospital; at this all relevant information is made available for the D.R.O. He has replies to his own inquiries from local offices of the Ministry of Labour, and may have obtained aid from other Ministry of Labour sources by using the Resettlement Advice Service (in our case the local resettlement advisory officer helped in many ways on general questions outside the scope of the D.R.O.'s work) or referring patients to the Advisory Careers Section of Appointments Offices, where higher education or training was sought. At the "placement interview" the D.R.O. also has available the psychiatrist's opinion of the man's value on the open labour market expressed in non-medical terms, the information obtained by the vocational psychologist, and the report on the patient's progress at his occupation. So far as is possible the patient's future occupation is made secure before he leaves the hospital.

General Procedures

Routine psychiatric treatment by individual interviews, physical methods of treatment, and social work need not be discussed, as they have followed orthodox lines. Occupation has been dealt with above. Group treatment similar to that carried out at Mill Hill (Jones, 1944) has been continued, with small individual differences, in each of the 7 blocks of 50 patients. One hour is set aside each morning for a meeting with all 50 patients, the nurses, and the doctor. At one meeting a play written and produced by the patients with the help of the nurses, and dealing with some social problem of interest to the group as a whole, is presented; the play may last anything from 5 to 30 minutes, and is followed by a discussion, with as many patients as possible contributing. The doctor acts as chairman,

* Since Mill Hill Emergency Hospital closed this unit is seconded from the Maudsley Hospital.

and withholds any personal contribution until some group solution of the problem appears to be emerging; he then tries to integrate all constructive trends into a viewpoint acceptable to the whole group. We believe that this technique has educational value, and even therapeutic value in some cases. Another day is used for showing documentary films dealing with social problems such as delinquency in children, etc., and these again are followed by a discussion. Two other days are used for explanatory talks on the nervous symptoms which the patients complain of; an attempt is made to give them sufficient knowledge of this subject to enable them to understand adequately their own symptoms. The remaining day is devoted to a general meeting, at which all problems bearing on the running of the block are discussed and dealt with on the spot, so far as is possible, thus eliminating the all too familiar "red tape." In these daily group meetings the patients have every chance of overcoming their isolation and developing a heightened group consciousness. The whole subject has been discussed in detail in previous papers (Jones, 1942, 1944).

All this helps in social rehabilitation, as does the work therapy, where the men come into contact with members of the normal working community. In line with this are the nurses' dancing classes, held at least once a week in each block, and reserved exclusively for patients who are unable to dance and wish to learn. Each block acts as a host to a party of 20 girls from a near-by factory once a fortnight; the men plan this dance or social, and the fact that they are themselves responsible for all arrangements is most beneficial. Approximately once a fortnight the patients stage for the whole hospital a programme of one-act plays or variety, thus maintaining a dramatic tradition which grew up in their prison camps. They produce their own weekly newspaper, now in its 15th number. It comprises 10 foolscap pages, with coloured illustrations, using stencils and an art-silk screen, and is a valuable medium for expression, not only from the literary point of view but also to point out real or supposed defects in the hospital organization. The staff of the *Grapevine*, as it is called (in prison camps the word was used to describe the method by which news was disseminated among the P.O.W.s), also concern themselves with posters popularizing the various occupations, printing programmes for variety shows, etc. The Entertainments Committee meets weekly, and has one patient and one nurse representing each block. The general aim is to give the patients as much freedom as possible in running the unit, to get them to organize their own leisure activities, and, besides giving them ample opportunity to air their grievances, to expect them to provide a solution, which is acted on with the minimum of delay. Any spontaneous self-expression is welcomed, and a patient, if interested enough, may choose to write or paint, etc., rather than follow the organized work therapy. At a less exalted level some patients are allowed to spend their day painting and decorating the wards. Within this loose framework, however, discipline is rigorously enforced. We believe it is essential to show the patients that we are in earnest, and it matters to us that they attend occupation or P.T., etc., 100%. The rule is to give one explanatory warning, and if a second offence occurs the patient is considered to have failed to co-operate fully in treatment, and he is recommended to be posted or treated at a military hospital, where he would come under stricter military discipline.

Discussion

The foregoing account describes some of the activities of this P.O.W. neurosis unit. The procedure would be equally applicable to any group of neurosis patients. Huge numbers of neurotics have been, and are being, discharged from the Forces, and facilities for their treatment in civilian life are quite inadequate. Very few out-patient clinics exist, and the number of beds available for the in-patient treatment of civilian neurotics in the whole of England is almost certainly less than 500. Conditions on the labour market at present are relatively favourable to the neurotic, and, further, he is in most instances protected by the Reinstatement in Civil Employment Act of 1944, which obliges employers to re-engage a former employee on terms not less favourable to him than he would have had in that occupation if he had not joined the Forces. If the employee was in employment continuously for a period of not less than 52 weeks before joining the Army, then the employer is obliged to re-employ him for at least 52 weeks. As demobilization proceeds, however, we may assume that the lot of the neurotic on the labour market will become progressively harder. Many of these men have potentialities which, if used, would enable them to succeed in some employment: such potentialities cannot be measured adequately by psychological tests alone, although useful information can certainly be obtained; what is needed is the practical test of actual employment under supervised conditions. If certain zones were set up throughout the country and a representative group of employers within such zones given a Government subsidy, the framework necessary for placements would be established. Such firms could then afford to employ a skilled man to supervise, teach, and report on the aptitude, interest, persistence, etc., of men under his charge. Alternatively, the Ministry of Labour might have a training centre in such zones, with the various courses of training available, and the instructors might be used in much the same way as the subsidized firms.

Given such a framework the immediate problem of the rehabilitation of the neurotic to useful civilian employment might be worked out as follows. Existing psychiatric treatment facilities should be maintained so far as is possible. Existing E.M.S. neurosis centres will presumably disappear in the near future, along with the other E.M.S. hospitals. Plans should be afoot either to replace such neurosis centres or to retain such as will be urgently needed. The weakness of replacement is that it may take months or years to organize a really efficient treatment centre, and a tradition which is so important in such a centre does not grow up overnight; a general hospital may be set up on very short notice—it is much more difficult to set up an efficient neurosis centre.

Even more important is the question of nurses: work in a neurosis centre is a highly specialized form of nursing, and neither the general hospital nor the mental hospital training prepares girls for it. In consequence, when neurosis centres were formed during the war they had to start training their nurses in this type of work; if existing centres close and the nurses are disbanded, it will take years to train an efficient team again. In my opinion a neurosis centre without suitably trained nurses is a doubtful asset to the community. If such centres existed for the treatment, selection, and placement of neurotic civilians the most difficult problems could be sent to them; these centres would be in the best possible position to handle such problems, as their therapeutic programme and supervision of the patient's employment could be carried out much more thoroughly than on an out-patient basis. A patient considered unable to succeed on the open labour market could be recommended for sheltered employment after such hospital supervision—few psychiatrists would be prepared to make such recommendation on the basis of out-patient interviews only. Alternatively, complete change of employment might not be recommended, although considered desirable by the psychiatrist or vocational psychologist, because the risk appeared to be too great: at the type of centre outlined such a step could be tried tentatively without jeopardizing the patient's whole future. Briefly, a neurosis centre might be used to separate out the most difficult cases and place them either in sheltered employment (if facilities were made available) or in an employment chosen on the basis of the fullest possible inquiry from psychological, psychiatric, and industrial angles.

Out-patient treatment facilities would have to be considerably increased: existing clinics, if adequately staffed, could be used in the first place, but there would seem to be a strong case for appointing full-time psychiatrists who would be prepared to study the particular problems presented by cases referred from the employment exchanges, and would familiarize themselves with the local industries, factory doctors, welfare officers, works managers, etc.; they would also have to be familiar with vocational selection methods and work in close collaboration with the industrial psychologist. They would use the subsidized firms in their zone for selection and placement in much the same way as would be done from the neurosis centres. Cases needing in-patient treatment would of course be referred to the neurosis centre, which should be fed entirely from these specialized out-patient departments.

It is as yet too early to discuss results from this centre, but a follow-up study is being made by the psychiatric social

worker. One really pleasant aspect of the community here is the popularity of the D.R.O.; at group meetings, if his opinion is sought on a technical point his appearance is greeted by cheers: gone are the memories of the "dole" and the Labour Exchange.

I wish to express my indebtedness to Dr. A. B. Stokes, medical superintendent of the Maudsley Hospital, who has been father to many of the ideas put into practice here and has helped us in every possible way; also to the people of Dartford, who have responded so generously to help the P.O.W.s, and to Surg. Capt. R. G. Henderson, medical superintendent of the Southern Hospital, who has extended to us the fullest possible co-operation.

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THE PROFESSION AND THE BILL

MEETING OF BOURNEMOUTH PRACTITIONERS

ADDRESS BY CHAIRMAN OF COUNCIL

A meeting of practitioners, members and non-members of the Association, in the Bournemouth area was held on March 28, when an address was given by the Chairman of Council, Dr. H. Guy Dain. The meeting was announced to be held at the Royal Victoria and West Hants Hospital, but the numbers turning up were so large that an adjournment was made to St. John's Parish Hall, Boscombe. Dr. Douglas Granger, chairman of the Division, presided, and was supported on the platform by Sir Kaye Le Fleming, Dr. O. C. Carter, and Dr. Doris Odlum. The honorary secretary of the Division, Mr. Ross Smith, mentioned that a public meeting had been convened by the Division in Bournemouth Town Hall on April 10, and that a panel of some 16 or 18 speakers had been arranged to give addresses to rotary clubs, political party organizations, and women's institutes.

A Disappointing Bill

Dr. Dain began his address by saying that present events justified any size of meeting that could be arranged. It was of the utmost importance that the profession and the public should be made familiar with the situation as it developed. They now had before them the Bill of which they had heard so much and thought about for so long. For three years at least they had been considering what form such a service should take, and it was fortunate that there had been time to clarify their ideas on this subject before the Bill was actually introduced. Had the Bill been brought forward two years ago the profession would not have been so well able to deal with it. In the conversations with Mr. Willink they did arrive at a large measure of agreement concerning essential factors, but the present Minister said at first that he was too busy on housing to talk on the medical problem, and when, in the early part of this year, having learned that a Bill was being drafted, the Negotiating Committee asked him to meeet them, which he did, he announced that he was not prepared to negotiate with anybody. He was ready to hear comments, not to enter into discussions. Certainly the Bill showed boldness. The Minister had had courage to take a strong line—particularly on the taking over of hospitals—without regard to expected opposition, and now the L.C.C. and other Socialist authorities were parting with their hospitals like lambs. The Minister was to be commended for having seen the wisdom of centring hospital regions on universities, and, in another part of the Bill, for giving doctors some share in administration. He had said that he would expect the miners to have a say in their industry, and he could not deny the same right to doctors.

Nevertheless, Dr. Dain continued, the Bill was most disappointing. It did not co-ordinate the services run by the various Ministries. It did not produce a single health service, but three health services, differently administered and under different management. On being challenged about this, Mr. Bevan said that it was those who worked in the respective services who would co-ordinate them—not a very good answer.

The Future of the Hospitals

The new hospital service, including the voluntary hospitals, would be entirely in the hands of the Minister. Although the Minister had said that there would be private beds, it might well happen that in some areas, under pressure for public beds, the private accommodation would be taken over, and consulting physicians who did private practice would find great difficulty in continuing it owing to lack of private bed provision. It was not difficult to see that before long certain physicians and surgeons would be whole-time salaried servants of the State. The Minister had not laid down the constitution of the Regional Boards who were to administer the hospitals, though he had laid down the constitution of the Executive Councils. His explanation was that the constitution of the boards might vary with the region, some regions being predominantly voluntary and others predominantly local authority. But it would be easy under the Bill for the boards to become almost entirely local authority. One interesting word in the White Paper was "initially" ("each board will be composed of people . . . including, initially, those with experience of the voluntary hospital system") (para. 20)—suggesting that presently the initiative and character of the voluntary hospitals would be destroyed. The appointments to hospitals would be made by Regional Boards. It was true that the terms of service of specialists as well as consultants would be arranged centrally, but there would be an alteration in the relationship between the staff and the hospitals: the staff would be appointed to the regional service and not to the actual hospital.

Public health provisions in the Bill left the situation very much as it was now, except that compulsory vaccination was abolished.

"Direction"

The proposal to abolish goodwill in practices involved serious considerations. The attitude of the B.M.A. had been that there was no need whatever compulsorily to distribute doctors. In so far as there was inequality of distribution between areas it was largely because some areas could better afford to pay for doctoring than others; when provision was made in a State service for everybody, then doctors would rearrange themselves more naturally in places where their living could be earned. When National Health Insurance came in there were great alterations in the number of doctors willing to work in closely populated town areas. The Central Medical War Committee had elicited that it was very misleading to say of a particular area like Bournemouth that on the basis of total number of doctors to population it was over-doctored, because such an area contained a large proportion of elderly doctors, doctors retired or on the point of retirement and undertaking only a relatively small amount of work. The profession was prepared to see, without resorting to compulsion, that there was a proper distribution to fill the gaps.

Mr. Bevan had realized that the measure of direction imposed in the Bill would upset the value of practices, and therefore, in return for the abolition of goodwill, the compensation proposals were put forward. The Minister had been informed by the Association that it had no power to enter into an agreement with him on this subject, that the Representative Body had declared itself opposed to the abolition of sale and purchase. Without compromise on the principle, however, there had been consultations between the actuarial and statistical experts of the Association and the Government actuary, as a result of which the global sum of £66,000,000 was reached. It was a lot of money for the country to find in return for nothing whatever of value to the State, and it represented no gain to members of the profession who would receive a corresponding sum in the ordinary course of events.

One point to bear in mind was that the compensation would be received on death or on retirement or in exceptional cases where a practitioner was seriously in debt for the purchase of his practice. He also referred to the penalties which attended any attempt to sell supposed goodwill after compensation. If a practitioner attempted to sell his house to his successor in the practice at more than its proper market value after compensation had been received it would be an offence for which there was a prescribed penalty. One point about compensation was the effect it would have on partnerships. They were all agreed that it would be a great advantage for practices to be conducted in groups and partnerships, but

with monetary considerations taken out of the partnership agreement it was questionable what was going to hold partnerships together. These proposals would break up partnership practice rather than encourage it.

Objections to Basic Salary Payment

No statement was made in the Bill as to the method by which doctors were to be paid. The White Paper (para. 46) spoke of a combination of salary and capitation fee.

"We have said much in the past about free choice, but perhaps have never properly appreciated its full significance. It was one of the cardinal principles of our predecessors in 1911. There are people who say, 'Yes, but there is not much free choice anyhow. In lots of areas there is only one doctor. So why bother?' But free choice involves a great deal more than that. Now that the whole population are in the scheme it is of the utmost importance as affecting this principle how doctors are to be paid. If paid by salary they become the servants of the people who employ them. If paid by capitation fee or per case they are in an entirely different position; they are not paid servants, they are contractors contracting with the Government to do a certain job."

If all doctors were paid by salary and those of about the same age got the same sort of salary the Government would naturally want to see that they did approximately the same amount of work, and the result would be that doctors less acceptable to patients would have patients allocated to them. The progress of the doctor in his profession should depend on the patient's choice and not on the good will of senior officers. The moment they accepted a part-time salary they were on the slope. If the profession was to escape the thraldom of a civil service the general practitioner must in no circumstances be paid a salary. "We may have an enormous fight for this, but it is an essential freedom of the doctor for which I hope we are prepared to stand." (Applause.)

The disciplinary machinery under National Health Insurance had on the whole proved satisfactory, thanks to the safeguards on which the profession had insisted, but Dr. Dain was convinced that that machinery would not be sufficient when the whole profession was included in the service. There should be some sort of appeal beyond the Minister. Another matter of insistence should be that every registered doctor had the opportunity to earn his living. A practitioner might find himself refused permission in area after area. Again, in the Bill there was nothing to protect the civil rights of the practitioner, and it might be held that a doctor, because he received money from State funds, must not sit on the local council or in Parliament. No such restriction could be tolerated.

Future Action

In concluding his address Dr. Dain said that if the Bill as it stood should go through unaltered he hoped and expected that the profession would say that it would not accept service. The utmost endeavour should be made during the ensuing weeks to arrange for public support to be enlisted on behalf of those cardinal principles which the profession had laid down. In this way it was possible to influence the Government notwithstanding its Parliamentary majority.

"I have great hopes that we may secure the modification of the Bill very materially. After all, it is up to the Minister to provide a service for the country, and he cannot provide a service for 100% of the people unless he has 100% of the doctors. That fact alone may lead to the consideration of the sort of modifications which the profession would accept.

"When the final shape of the Bill is known it will be the responsibility of the profession to say whether it accepts service."

Various Points of Criticism

When the meeting was thrown open for questions one member pointed out the contradiction in terms whereby it was stated in the Financial Memorandum that the service would cost £152 million, and yet the remuneration of doctors had not yet been decided. Was it an unfair inference that the Ministry had worked out the figures and was prepared to get a cheaper service if it could? Dr. Dain said that something of the estimated amount for general practitioner service could be gathered from the figure of £45 million for that service, together with pharmaceutical, dental, and ophthalmic services, this for a population of more than 40,000,000. Until the Spens Committee report was published it was not known what the general practitioner service was going to cost. One thing about the remuneration under the new service was that there must be an end of those continual representations to the Ministry which had marked the thirty years of the National Insurance Act. There must be some equivalent to the Wages Boards in industry.

One questioner asked about compensation for specialists. Dr. Dain said that in certain areas eye specialists and in some cases ear-nose-and-throat specialists had been in the habit of buying and selling their practices, and this point had been put to the Ministry. "It struck the Ministry with great horror that this question should arise in another place, but they said that they were not interfering with that aspect and that these specialists could go on buying and selling their practices as they pleased."

He explained in answer to other questions how the £66 million compensation figure was arrived at—on the basis of two years' purchase on 1939 values plus a betterment factor of 16%, or of 1.9 years' purchase plus a betterment factor of 22%. The amount was held to apply to 17,900 practices. Asked what was the position of those not in practice in 1939, Dr. Dain said that they would have to furnish evidence of their present practice. Obviously it would be necessary to set up local tribunals.

A member wanted to know whether there was anything in the Bill to protect clinical freedom. Dr. Dain replied that there was nothing which impaired it except in so far as loss of practice goodwill, institution of a certain amount of direction, and a part-salary basis might be held to do so as pointing to complete employment by the State. Another asked about the future position of the B.M.A. as the body speaking for the profession. Dr. Dain said that the Association had such a variety of interests and occupations that when this service was started, in whatever form, the importance of the Association in upholding the interests of men and women serving would be greater than ever. One young practitioner said that large numbers of recently demobilized doctors would be tempted to go into the Government scheme for economic and security reasons. Dr. Dain said he realized that there was a large group of people in that position, but he hoped they would not be tempted towards taking the easy way. The Association was constantly being asked for advice on this subject, and it urged that no practitioner should cheerfully consider the prospect of taking on a job at a salary which would make him the servant of the State for life.

Part-time Service

On the question of part-time work in a national service, which was a difficulty to more than one speaker, Dr. Dain said that doctors would be free to take private work except that they must not take on as private patients persons for whom they had accepted responsibility as public patients. It was no exaggeration to say that at present no two doctors in private practice were doing the same amount of work for exactly the same number of people, and while there was variety in the number of people to whom a doctor gave service and in the amount of service he was required to give, there would be no such thing as a whole-time job. Of course, his list must have a ceiling, but that would not act to any extent in cutting out private practice, except for a very few people.

In reply to other questions Dr. Dain said that he hoped members of the Association appreciated how fully and promptly Headquarters had acted, both in putting over the Association's case to the public and in informing the members of the profession themselves. (Applause.) This had been a feat of great magnitude for which Dr. Hill was largely responsible. He also referred to the setting up of the Guarantee Fund. There was nothing "phoney" about it, and while it might never have to be used, beyond a certain part of it for expenses, it might, on the other hand, prove of the most vital importance. He mentioned that a number of subscriptions had been received from the laity. The patient of one doctor, having ascertained from him that he proposed to subscribe his £25, said that she would add £25 to his and make it £50.

Back to 1911

Sir Kaye Le Fleming said that that evening he was strongly reminded of the time when he was chairman of that Division and the National Health Insurance Bill was under debate. There were crowded meetings of the profession in that town, and 95% of the profession pledged themselves to refuse service unless certain terms were conceded. In the end the terms offered were not satisfactory in the view of 95% of the profession, and yet the remaining 5% were able to split the profession and enable the Government to get what it wanted. The present Bill was brought forward by a Labour Government sustained by a large Parliamentary majority and was the first-fruits of a pledge to introduce a whole-time salaried State service. The small amount of direction in the present Bill would lead eventually to every doctor in the country being under direction. He described the forces they had to meet, including groups in their own profession who favoured such a service. The character and extent of those forces must not be underrated. He deprecated a false optimism. He wanted to see the profession united on the things on which it could be united in a dignified way and putting aside those issues it could not successfully further because of its own disunion.

"We can all agree on the principle of voluntaryism, we can all agree in opposition to direction, and I should like to see the profession take the stand that this Bill is bad for the public for this, that, and the other reason, but that we are likely to be steam-rollered by political and economic factors which we are unable to resist, and that it is the public who must save themselves and our profession; they must not look to us to save them. I hope that at the Representative Meeting we shall abstain from bickering over small points and concentrate on the big principles on which we can all stand united." (Applause.)

Dr. Dain said that he hoped they would not be too depressed by what Sir Kaye Le Fleming had just said. It was true that in 1911 many people said they would not accept the terms, but the issue then was only a question of how much money was to be available for the remuneration of practitioners. The Association at the time of the passing of the National Health Insurance Act had already gained the cardinal principles for which it had stood—that the profession should not be employed by local authorities or by friendly societies, that every practitioner should have the right to take part in the service, that the patient should have free choice of doctor. All those things had to be fought for and secured. It was only on the money that they seemed to founder at the end. The *Westminster Gazette* of that day, at the end of the fight, said that the ordinary Englishman by tradition did not know when he was beaten, but the B.M.A. did not know when it had won. "We have to stand now for public freedom and for our own freedom, and I think we shall be brave enough to do both." (Applause.)

He added that he hoped at the forthcoming Representative Meeting they would not attempt to tinker with the report already placed before them by the Council, but would support the Council by an overwhelming vote in the maintenance of the principles set out. It was hoped that there would be a good "second reading" debate in the Representative Body and that the volume of support in reaffirmation of what had already been decided would impress alike the public and the Government.

Dr. O. C. Carter, in proposing a vote of thanks to Dr. Dain, said that the Chairman of Council had shown a masterly grip of the whole subject. He was a pillar of strength to the Association, and if at the periphery they did their job as well as he did it at the centre they would not only save themselves but save the future of medicine.

The Ministry of Health has published as a pamphlet, with specimens of printed material, particulars about immunization against diphtheria, giving guidance to local authorities for planning and carrying out campaigns for the protection of children. The main emphasis of the campaign is now on immunization of children before the age of 1 year. Publicity material available to local authorities includes press advertisements, posters, cinema slides, and leaflets for use in conjunction with personal persuasion by doctors, health visitors, teachers, and voluntary workers. The Minister hopes for a planned campaign in the coming spring and summer months.

PUBLIC OPINION

THE PRESS AND THE BILL

Press comment on the National Health Service Bill is inevitably divided, and division is most marked along the lines of political cleavage. Reading from left to right the *Daily Herald* (March 22) appeared to be thinking wishfully:

"It is true that the medical profession becomes partly a public service. That proposal, we believe, will not meet with the opposition from the profession which the Tory Central Office might desire.

"It is *not* true that patient and doctor are to be robbed of their rights. These bogies find no place in the Bill, and after a few weeks of discussions we prophesy that the diehard campaigners will be hard put to find an argument."

The Contemporary Pattern

The *News Chronicle* (March 22) welcomed the Bill as a "bold and enlightened measure," and commented:

"The new Bill fits into the contemporary pattern of social legislation, and to oppose it would be like trying to halt the tides.

"The doctors, too, will have a great measure of freedom under the new scheme, if they care to exercise it. . . . The close personal relationship between doctor and patient will be maintained. Indeed, the transition from private to public treatment of patients is to be made as painless for the doctors as possible, and the advantages which they will enjoy under the Bill will be obvious at least to the younger and more progressive members of the profession."

The *Daily Express* (March 22) described the Bill as "a vast extension of the panel system, supplemented by a State-run hospital and specialist service," and added:

"It squeezes and reduces the private practice of medicine and surgery, with its confidential and unique relationship between doctor and patient.

"And it will turn most doctors into full-time or part-time State servants dependent for their livelihoods on the satisfaction they give, not to their patients, but to the State.

"The power of the citizen to see that his local hospital is efficiently run is taken from him.

"Finally the doctors themselves. They bitterly resent the attempt to manœuvre them into becoming civil servants. They ask, 'What have we done to deserve this?' They sense a reflection on their calling, a suggestion that they have failed in their duty to the public."

Injustice and Regimentation

The *Evening Standard* (March 21) took, if anything, an even stronger line, viewing the Bill as "a heavy blow to the age-long tradition of personal relationships between doctor and patient."

"Theoretically all are free to choose their own doctor at the Health Centres, but in effect practitioners are to be encouraged to pool their remuneration with the aim of 'eliminating competition for patients.' Where fees are pooled, how long will it be before patients become subject to the same inhuman system?

". . . As a fact, the Bill is a first step towards the full-time employment of doctors as State servants. . . . Doctors returning from the Services or newly qualified cannot found new practices: they are to be directed. The doctors, moreover, threatened by compulsory State service, liable to direction and allowed neither to buy nor sell their practices—for some reason this does not apply to dentists—do not even know what rate of remuneration they will receive. It is not hard to imagine what answer would be given to such treatment by the miners, for instance.

"Soon the Bill will come before the House. It will be fought by the doctors. It should be fought by all who detest injustice and regimentation."

According to the *Daily Sketch* (March 22) "this Bill is the apotheosis of red tape. It threatens the independence of the general practitioner. The doctors have a justifiable dread of becoming salaried Government servants."

"The doctors object to being directed to districts where they do not want to go. They rightly demand freedom of choice. The varying salaries offered in 'under-doctored' areas constitute an attempt by the Minister to induce doctors rather than to direct them. The goodwill of a practice will in future no longer be owned by a doctor. One more wedge in their independence.

"It is not a good thing for doctors' fees to be pooled; it is not a good thing for the sale of practices to be forbidden. It is a bad thing that hospitals established for the special benefit of religious denominations and other bodies should be deprived of their specific and original intentions.

"The net cost to the State of this scheme will be an annual one of some £95,000,000. The compensation payable to doctors under

the scheme will cost at least £66,000,000. In the face of all our commitments, is not this equivalent to sheer lunacy? "

Circumscribing Independence

The *Scotsman* (March 22) made two most important points: that "in the long run doctors will become full-time salaried servants of the State"; and that professional freedom and responsibility for patients will be impaired."

"Although the Bill seems to offer a certain amount of flexibility and freedom of choice to the public and to doctors, it is not likely that a vast State scheme will be long in operation without bringing about radical changes in the personal relationship between doctors and patients or without circumscribing the independence of practitioners in professional matters. A national health scheme of a less revolutionary nature and more widely acceptable might have been formed by the extension of present services, such as bringing the dependants of insured persons within the scope of National Health Insurance, and by more co-ordination of hospital facilities."

"Such financial estimates as are given make it clear that the scheme will be a heavy burden for the State. That might be borne if there were more assurance that it would result in better medical treatment and improved public health services, but the scheme involves such far-reaching departures from traditional methods that it inspires more uncertainty and doubts than confidence."

Serious and Seductive

The *Daily Telegraph* (March 22 and 23) in successive leading articles pointed out that the Bill "sweeps away many admirable things."

"The selfless devotion of doctors in giving their services to hospitals will apparently become superfluous. The appeal to the charitable public—the response to which used to be a fine feature of our national life—must be lessened."

"Though it is undoubtedly right that access to the means of the prevention and cure of disease should be the same for rich and poor alike, it remains to be seen what will be the effect on the national character and spirit of having everything for nothing—or at least for nothing except the persistence of a crushing rate of taxation. Nevertheless, the weight of argument is on the side of the new order which the Bill seeks to create."

"Ostensibly the principle of freedom of doctor and patient is . . . honoured. In fact, it seems almost certain that private practice in the existing sense will gradually die out; but it will not be arbitrarily exterminated."

"The broad conclusion is that within the limits of the agreed principle that there is to be a national health service, Mr. Bevan has produced a serious and in some respects seductive scheme. On many of its details judgment must be reserved for full consideration, but it does not raise party issues, and it must therefore be hoped that he will consider objectively amendments when they are presented in due course. What we all want is a service which will lessen both the prevalence and the ravages of disease; and the onus is on Mr. Bevan to show that his proposals will secure it."

"But it is difficult to believe that the objection of the medical profession to a scheme which will in due course turn its members into State-employed civil servants will be softened within the next few weeks, and equally difficult to believe that Mr. Bevan eased the way when, as Dr. Dain states, he refused in any sense to negotiate with the doctors."

This Splendid Venture

The *Manchester Guardian* (March 22), warning of reefs ahead, said that ". . . the principles of democratic responsibility and professional guidance are confused. The Central Health Services Council remains, but the inclusion of *ex-officio* members who can only regard themselves as delegates of sectional interests will detract from its influence and authority," and went on:

"Not only will doctors be free to stay out and practise privately (as, indeed, they should be); they would also be allowed to take private fees from patients who have already paid in taxes and insurance contributions for treatment by them as participants in the public service. The dangers of this provision were recognized in the Coalition White Paper—which could suggest no means of guarding against them—as well as in the Labour Party's critical commentary. The plain fact is that no safeguard is possible."

"Poor patients will claim their rights and be convinced that they are getting an inferior service; rich patients—and many others who cannot really afford it—will insist on paying fees in the expectation of preferential treatment, and will go elsewhere if they do not get what they are paying for. This, in short, is a false freedom that can only survive to the extent that it is abused. It must inevitably poison the doctor–patient relationship. It is the reef on which this splendid venture, with all its prospects for development, might founder at the outset."

Bitter Medicine

The *Times* (March 22) commented: "The Government have wisely decided not to force a salaried service upon general practitioners, but to combine a basic salary with capitation fees in variable but as yet unknown proportions. They have also had the courage to put an end to the sale of publicly remunerated practices, a reform now probably supported by at least half of the medical profession." And on the proposed hospital services:

"If it is right to-day to transfer the municipal hospitals to regional authorities, as the Coalition White Paper advocated with some vigour, it cannot be wrong to transfer the voluntary hospitals too, even though, in the absence of permanent authorities intermediate between local and central government, this transfer in both cases involves vesting the legal ownership of hospital buildings in the Minister of Health. It cannot be wrong, yet it may be unwise. The dangers are obvious enough—rigidity of central control, stifling of initiative among doctors, weakening of contact between patient and hospital management, discouragement of voluntary personal service. But Mr. Bevan's solution of the hospital problem is at least as good as any alternative yet propounded, and his system could be kept free of these obvious evils. It could in fact be so administered as to permit the rapid development of a well-knit yet flexible hospital service throughout the country, with a spirit of healthy competition between the regions."

"Mr. Bevan is aware of the dangers of excessive centralization and of the need to draw all branches of the medical and allied professions into the work of planning and administration. His solution is far from ideal, and for many it will be bitter medicine. Some doctors will be attracted to it because it offers them freedom from control by local authorities and gives them wide opportunities for team work and participation in operating the service, though others will argue that these ends can be attained by other means. In spite of its drastic administrative simplifications, the Bill leaves many problems of co-ordination to be tackled. But the question to be answered is how the teams of skilled men and women who are the hospitals can best serve the community."

Not Civil Servants?

The Sunday press showed just as great a variety of opinion. *Reynolds News* (March 24) claimed that the Bill "meets the doctors more than half way, offers them compensation beyond their dreams, visualizes a condition of things in which medical service would really be the highest form of service, and answers every canard the B.M.A. has ever issued."

"It is indeed too soft in its handling of the professional propagandists who put out the B.M.A. case and overlooks the well-known fact that the B.M.A. ballot of the doctors showed them to be already in favour of such a service as this. The public will do well to understand what they are being offered, and individually and collectively must make it clear to the doctors that this service cannot be sabotaged by any section, however influential."

The *Sunday Graphic* (March 24) wrote: "You cannot make men humane by Act of Parliment; and every step in State regimentation makes less possible the private and personal relationship which should exist between doctor and patient." The *Empire News* (March 24) suggested: "Surely it would be wise to concentrate first on providing greatly improved housing conditions, for squalid, overcrowded, and unhygienic homes will undo the advantages of the most utopian health centre." The *Sunday Chronicle* (March 24) wanted to know "Is one man entitled to antagonize the majority of a medical profession which firmly believes that so complete an autocracy must lower the standards of our present health services? Can one man—however well-intentioned—avoid the mediocrity that must follow the regimentation of our doctors into the ranks of our Civil Service?"

According to the Political Correspondent of the *Observer* (March 24): "Mr. Bevan has his answers ready, and believes they will be found convincing. . . ."

"Those who enter [the Service] will not rank as civil servants, in spite of some loose talk on the subject by Right wing critics of the Bill. Their contracts of employment will be . . . not directly with local authorities or the State. Hence they will retain all their ordinary rights of citizens, including the right to stand for Parliament."

Doctors "will be 'State-salaried' only in a limited sense, for the larger part of their remuneration will often come from capitation fees, dependent on the number of patients they attract."

"The basic salary for a young doctor may not be more than £400 a year, with local variations, but capitation fees may be high enough

to enable him to earn up to £1,000 a year at a quite early stage in his career."

The *Sunday Times* (March 22) re-stated four freedoms: "Freedom for patient and doctor to come into the new service, or stay out; freedom for people to choose their own medical advisers; professional and scientific freedom for the doctor; and the free relationship of confidence and intimacy between doctor and patient under the State system as in private practice."

"The question is not whether we should have a comprehensive national health scheme or no such scheme. It is whether the logic of Socialist doctrine, given the opportunity of a common effort to raise the standards of public health, is to grind out to its bitter conclusion of a completely regimented and monopolistic State service, or whether the four essential freedoms for doctors and patients are to be preserved within and alongside a sound national health system."

History and Sentiment

Of the weekly papers the *Spectator* (March 29), in a careful review of the Bill, observed:

"The new Bill goes much too far towards meeting the doctors' objections for any such hostility. One reasonable fear, at a time when the Coalition Government's proposals were under discussion, was that the doctor would find himself the paid employee of some local authority, responsible ultimately to a bureaucracy in Whitehall and with neither the knowledge nor the sympathy to make its administration tolerable. The outstanding feature of the present Bill is the extent of the share of administration accorded to the profession at every stage."

"The Bill, of course, is susceptible of improvement, perhaps of substantial improvement. The relation of private practice to public service, and the method of a doctor's remuneration, partly in the form of basic salary, partly of capitation fees, are matters which must be fully discussed inside and outside Parliament. So, much more, must the vitally important section of the Bill which deals with the hospitals. Here sentiment, so far as the voluntary hospitals are concerned, points one way and practical considerations the other. There is nothing more admirable in national history than the voluntary hospitals' record of service, but the voluntary hospitals have become hopelessly inadequate to the needs of to-day and most of them are in financial difficulties. Hospital accommodation as a whole falls deplorably short of the need; the waiting-lists of sick and suffering are a blot."

"If nothing but mere efficiency were in question this plan would stand approved, but history and sentiment have their place, and it is by no means certain that the nationalization of the voluntary hospitals is essential; effective co-ordination and satisfactory financial arrangements may well be attainable without that. If the Government is wise it will give ample time for the discussion of this, as of many other arguable provisions of the Bill. If the doctors on their side are wise they will set themselves to secure by reasoned amendment what they could never achieve by flamboyant opposition. They will get full public support in that."

According to the *Economist* (March 23): "No doubt the B.M.A. may find provisions which are incompatible with the 'freedom of the medical profession,' but it is difficult to see how, if a national health service is to be established at all, more professional representation could be given and greater deference be paid to the doctors' objections. The chief losers under the new Bill seem, at first glance, to be the local authorities. All of them will lose their hospitals, and the minor authorities will lose their present health functions, such as maternity and child welfare, to the counties and county boroughs. Even if Mr. Bevan succeeds in disarming the doctors, the progress of the Bill may not be easy."

The *New Statesman and Nation* (March 30) asked:

"What do the doctors want? That nobody yet knows, though we shall probably know a good deal better before Mr. Bevan's Health Bill gets into operation. Substitute, then, a less unanswerable question. What does the articulate minority that has taken charge, so far, of the doctors' case want, and hope to achieve, by the line it is taking up in relation to the Bill? It cannot be simply more money for the profession as a whole; there is every sign that the Government means to leave the B.M.A. with no plausible ground for complaint on that account. Money, of course, does enter into the question."

"To state this is enough to make it clear that money plays only a small part in the present case of the doctors against the Government—though it may have played a larger part at an earlier stage, before the generosity of the Government's financial intentions had been made known. . . . These other grounds are usually stated in terms of vigorous objection to bureaucratic control, and especially to control by local authorities; and they are often summed up in an objection to salaried, as opposed to fee-getting, practice. To many doctors—even to a good many panel doctors—a salary feels like a professional come-down in comparison with a fee, or even a capitation fee. It seems somehow to be less 'professional.'"

"Now this, when one comes to think about it, is rather strange. In the higher ranges of the teaching profession it is just the other way round."

"It is not, of course, entirely a matter of salaries *versus* fees. If it were, the prejudices of the traditionalists would hardly make headway against the desire of many of the younger doctors for a chance of a good, secure income without any need to put down (probably borrowed) capital in order to buy a practice. The fear of bureaucracy is also real, and would be worthy of respect if there were in fact any danger of it—or, at any rate, of more of it than is inevitably involved in any plan to provide a comprehensive medical service for the people. But, as the Government's Bill stands, the danger of bureaucracy, national or local, has surely been reduced to a minimum."

"Many young doctors are Socialists, and start out from a quite different set of assumptions about what is right; but most doctors of senior standing are not Socialists—far from it—and still take the class system for granted as the basis of their thinking."

Not Far Enough for Him

Three individual views received prominence. In the *Observer* (March 24) Lord Horder concluded a balanced survey of the position in these words:

"The doctor can, and must, make this seeming rigid structure flexible; he must make these dry bones live. But he must control the machine; he must not let the machine control him. For a doctor's work is as he does it, not as a system dictates it should be done. The glory of any free man's work is that it is an expression of himself rather than of a system. The doctor has changed much in things that are immaterial since he earned R. L. Stevenson's fine encomium. He must, and I believe he will, continue to deserve that it be said of him that he 'most notably exhibits the virtues of the race.'"

Dr. H. Guy Dain, writing in the *News of the World*, asked: "Will you be satisfied with a health service which places you and your doctor under State control? The best and most complete health service does not require this; indeed, it would not be best if it interfered with the real doctor–patient relationship."

And last but by no means least, Prof. Laski (quoted in the *Daily Telegraph* of March 25) said: "Mr. Bevan's National Health Service scheme did not go far enough for him. He would have abolished private practice. He described as pre-Adamite the economics of the British Medical Association."

SALARIES OF NURSES AND HOSPITAL DOMESTIC STAFF IN NORTHERN IRELAND

Three committees and a co-ordinating council have been set up in Northern Ireland to review and report on the salaries and conditions of service of nurses and hospital domestic staffs. Their duties will be similar to those of the Rushcliffe and Taylor Committees in England and Scotland and the Joint Council for Hospital Domestic Staffs in England. The first committee will be concerned with general nurses, under the chairmanship of Mr. C. J. A. Woodside; the second with mental nurses, with Dr. T. Carnwath as chairman; and the third with hospital domestic staffs. Dr. N. B. Graham will act as special medical adviser to the mental nurses committee. The members of each committee form two panels—one representing employing authorities and the other employees. The co-ordinating council will include the chairmen of the three committees and two members nominated by each panel. The action of the Minister in establishing these committees has been generally welcomed, and it is hoped that preliminary reports on urgent matters will be presented to him before the summer.

Local authorities are asked, in a recent circular, to submit to the Minister of Health proposals for improving hospital accommodation generally, but especially for nurses and domestic staff, and for providing domestic facilities which would make their work easier. Proposals, which should cover the needs of the next five years when it will be impossible to build new hospitals, should be listed in order of priority, first place being given to those which help hospitals to recruit and retain nursing and domestic staff. Schemes already before the Ministry should be included, and the estimated cost given where this has already been arrived at. It is thought that there are probably a number of alterations not requiring much building labour which could well be attended to now and which would add considerably to the efficiency of the hospital.

Reports of Societies

VASCULAR INJURIES IN WAR

At a meeting of the Section of Surgery of the Royal Society of Medicine on March 6, with Mr. E. F. FINCH in the chair, the subject for discussion was "Vascular Injuries in War."

Mr. MASON BROWN based his remarks on an analysis of a number of cases, British and Italian, dealt with at a surgical centre in Italy in 1944–5. Arterial wounds, he said, should be divided into two main classes: (1) those associated with great soft-tissue damage requiring urgent surgical treatment (in many such cases amputation should not be regarded as a confession of failure, but as the price paid by the patient for life-saving surgery), and (2) those associated with trivial wounds of entry and little or no external haemorrhage, but with haemorrhage into the tissues. The treatment adopted in the cases admitted to the centre, which included 78 cases of traumatic aneurysm, was influenced by the results of primary ligation. In early cases sutures were carried out if this was at all possible. The ischaemic limb was kept at rest in a cool environment, using fans during the summer months, and in a position which gave the maximum circulation—slightly elevated if there was oedema, but otherwise slightly dependent. Penicillin was employed liberally in the control of infections in the associated wound and in any wound distal to the lesion. Except for certain indications, such as external haemorrhage and secondary haemorrhage, no operation was carried out before the collateral circulation had been developed.

The operations—62 in all—were as follows:

Emergency operations (23): direct ligation 16; arterial suture 3; proximal ligation 4.

Operations on minor vessels (14): excision 9; quadruple ligation 3; arterial suture 1; aneurysmorrhaphy 1.

Operations on main vessels (25): arterial suture 11; aneurysmorrhaphy 1; direct ligation 11; ligation of fistula 1; ligation of neck of sac 1.

There was one death from ligation of the common iliac artery; in only two other cases were there complications. He added that a military surgeon could give only immediate results, and there must be a long-term follow-up. He hoped that this might be possible, in the British cases at least. Among the conclusions which seemed justifiable were: that the treatment of arterial wounds with minor soft-tissue injuries should be conservative; that the nature of the operation to be carried out should be decided only when the exact pathology had been displayed at operation; that, in the absence of emergency indications, operation should be delayed until the collateral circulation was established; and that the care of the ischaemic limb was of the greatest importance.

Effects of Sympathectomy

Mr. A. M. BOYD recounted his experience at the 63rd General Hospital, Cairo, 1942–5. For one reason or another he ligated 41 main arteries. In the war of 1914–18 Makins had shown that in a high percentage of cases gangrene followed ligation of the main vessels, but, apart from the presence of gangrene, there were other distressing complications—ischaemic necrosis followed by fibrosis, nerve palsies from poor blood supply, wasting muscles, and, last but not least, intermittent claudication. Makins had stated that ligating the associated vein was of assistance in maintaining the collateral circulation, but one could not help feeling that ligation of the vein could produce no more effect than the damming back of the venous flow, and that could be done equally well by posture. Moreover, ligation of the vein could produce a syndrome which was extremely disabling. The site of the ligation of the artery was important. But the main point he wanted to bring forward was the question of sympathectomy. With arterial lesions this was the quickest method of dealing with collateral circulation, though there was a certain amount of prejudice against sympathectomy, largely on account of physiological teaching. There was powerful evidence that sympathetic block did dilate the arterial tree. In 41 ligations of the main vessels he had carried out the appropriate sympathectomy in all but one case. In this series there was one case of gangrene, which he thought was due to operative error and the sympathectomy could not be blamed. Cases of arteriovenous aneurysm numbered 15; their location was extremely difficult.

Prof. J. R. LEARMONTH mentioned the work of the vascular centre established under the E.M.S. in Scotland. In one case in which a large aneurysm of the first part of the subclavian artery extended into the superior mediastinum a very mutilating operation was necessary before it was found, and it was a matter for gratification to find that there remained little or no impairment. Many patients with arteriovenous fistula had blood changes not completely recognized. In addition to an increased blood volume they had a relative polycythaemia and an increased load of haemoglobin in each corpuscle. Several cases had come their way in which a vascular tumour had followed injury. In some of these, but not in all, there had been a small cutaneous haemangioma, and that lent support to the view that haemangiomas as a whole were not true tumours, but merely aberrations from the primitive arrangements of the vessels.

Dr. F. ALBERT, professor of surgery at Liège, said that his own experience dated from the last war, since when he had been continuously interested in all aspects of the surgery and pathology of vascular lesions. One of the points he emphasized was that simple obliteration of the main blood supply of the limb, whether by localized compression or ligature, did not produce any vasoconstriction, but did produce an important degree of vasodilatation and entailed a fall in blood pressure, which became more and more marked as the experiment proceeded.

A preliminary follow-up of 34 patients at Park Prewett Hospital, Basingstoke, was presented by Mr. MAYER. The cases included 17 varicose aneurysms, 11 false aneurysms and arterial haematomas, and 6 aneurysmal varices. There were no deaths, no cases of gangrene, and only one case of ischaemic myositis. Cure by operation was effected in all cases except one, which was improved. Ligature was performed on 26, and suture on 6; of these 6 suture cases, 3 were completely successful, 1 partially successful, and 2 failed.

Mr. F. A. D'ABREU said that Makins drew attention to a condition which he called arterial shock, due to injury which, without actually tearing the artery, resulted in intense spasm of the artery and its collaterals. A man in Burma had a penetrating wound in the upper arm, followed by absence of pulse and quite cold hands. Arterial injury was diagnosed, but on arriving at the neuromuscular bundle no sign of the brachial artery could be found. After careful exploration he discovered a vessel no larger than a quill which had no pulsation in it. On dissecting this tiny vessel he was able to see pulsation return into it; the wound was closed, there was no haematoma, and the condition of arterial spasm completely disappeared. The man was evacuated in good condition.

Mr. A. W. BADENOCH stated that he had had the opportunity of seeing a number of cases of vascular injury, including injuries of the carotid. He himself saw several cases of ligature of the common or internal carotid, and in none of them was there any hemiplegia or other ill effect from the ligature: none of these cases had had a sympathectomy. Another speaker had had the same experience, and said that a series of over 100 cases of traumatic aneurysm had been dealt with at one centre without a single instance of gangrene, and in no case was sympathectomy done.

A clinical meeting of the Medical Society of the L.C.C. Service was held at Bethnal Green Hospital on March 6, when cases were demonstrated by the staffs of Bethnal Green and Hackney Hospitals. There were 90 members present. After the demonstration there was discussion upon some of the cases, including the use of silver filigree for operation upon herniae.

The Microbiological Panel of the Food Group of the Society of Chemical Industry held five meetings during the past year. The subjects of the eight papers included fungicidal action of copper; heat-resistance of micro-organisms; problems in the bacteriology of rivers; some aspects of disinfection; and amino-acids and the metabolism of the cell. The annual general meeting of the Panel will be held on April 12 at 2.15 p.m. at the London School of Hygiene and Tropical Medicine.

Correspondence

The Health Service Bill

SIR,—There is an aspect of this Bill which so far has received little attention but which, to me, appears to be of supreme importance to every citizen. I have examined the Bill and it looks to me uncommonly like the first step, and a big one, towards National Socialism as practised in Germany. The medical service there was early put under the dictatorship of a "Medical Fuehrer." This Bill will establish the Minister of Health in that capacity. I mention only a few of the signs that this is the intention. Camouflaged by the existence of the Central Health Services Council, ostensibly intended to help the Minister to co-operate with the medical profession, he can suppress its report if he disagrees with it instead of presenting it to Parliament. He is to be responsible for all our hospital and all the medical and nursing services. He is to control by Regulations all appointments made by the Regional Hospital Boards. Through the Medical Practice Committees he can include, or exclude, any new applicant for practice in any area. If he is not satisfied with the conduct of any board or committee he may transfer their functions to himself.

More detailed control is left to Regulations which must be presented to Parliament, but I have good reason to remember that this apparent safeguard was of little use in the similar situation which arose when the National Health Insurance Bill was being discussed. Literally hundreds of regulations and amendments were rushed through a House which hardly even pretended to examine them, for it was not physically possible to do so. The situation in this respect is not likely to be more favourable in the hands of a Government which prides itself "on getting things done." If I am right in my belief that the provisions of this Bill indicate that the medical profession is in future to be under what amounts to a dictatorship, what is to prevent other professions and trades being similarly dealt with?

I call it a dictatorship because the reading of the Bill convinces me that the Minister, unless this Bill is radically altered, can, in future, do anything he likes with the doctors (and through them with their patients) except leave them alone. Did the electorate really think that this is what we fought for?—I am, etc.,

ALFRED COX.

PS.—The above letter was submitted to the *Times*, whose Editor regretted that he was unable to use it.—A. C.

SIR,—All are agreed that the best possible health services should be available to all members of the community, and the fundamental problem is to decide the best method by which this goal can be reached. The imperfections of the present system depend upon financial stringency, for the working classes have always been reluctant to reserve funds for emergency ill-health, and since the First World War the voluntary hospitals have been unable to supply sufficient beds and services to meet the needs of the country. Moreover, patients of the working classes cannot now obtain hospital treatment free of charge, as was the case before the First World War, and many resent having to pay even for part of these services. Another complaint has been that the rich can obtain better treatment than the poor, and it is believed that if doctors become whole-time salaried servants of the State they will be unable to discriminate between the different social classes. It is excellent political propaganda to nationalize the health services, for it is clear that some form of State aid is necessary on financial grounds, the money coming ultimately from the pockets of the working classes. The question is not whether a State service should be opposed, but whether the proposals are the best possible. Fundamentally, the conflict between the Government and the profession will depend upon the extent to which bureaucracy intrudes into the administration of an expert service.

The new Health Service Bill has a better administrative framework than that of the Coalition White Paper. I think it would have been better to place the teaching hospitals and medical schools under a department of medical education and research at the Ministry, for I am not convinced that the universities always display a lively interest in late pre-clinical and clinical subjects. There must be a close association between the universities and the medical schools, but medical education and research are of such vital importance to the future of the Empire that they are worthy of special consideration, even to the extent of overriding the interests of the universities.

The pooling of the resources of the voluntary hospitals will cause great concern, and is probably based upon the Socialist idea of eliminating all "taint" of charity from the service. The Central Health Services Council is retained and will buffer complaints from all interested bodies. But who will be the mystical figures in the cloud-capped towers at the Ministry who have executive control? I cannot believe that the administration will succeed unless they are acknowledged experts in their particular branch. Apart from prophylaxis, what matters most in medicine are diagnosis and treatment, and I find it difficult to believe that a civil servant without medical training is the best person to have executive control.

For great achievement three essentials are required: (1) Experts at the top with executive control. (2) The best possible equipment. (3) A spirit of service and vigour among the executants. This rule holds in all walks of life, from the battles of Trafalgar, of Britain, and of El Alamein to any successful play or business. I am sceptical about No. 1 for the proposed health service. No. 2 has possibilities, and now we come to No. 3. I doubt whether a whole-time salaried medical officer will be content unless he has good working conditions, a reasonable salary, and hours of work corresponding to those of other salaried officials. In time he may ask for a forty-hour week as others do. He should have something more—what the Russians accept as "greater reward for greater service."

Whether the service will succeed or fail depends upon the members of our profession. If they join the service they must know what their commitments will be and for what reasons they can be dismissed, fined, suspended, or reprimanded. I think that doctors should have the power to refuse particular individuals as patients, for we all know how difficult some people can be. Many people will want to get something to show for their weekly contributions, which are substantial, and much more will be expected of practitioners and consultants than in the past; it may be impossible to contend with this extra pressure of work. At the moment, with the meagre information available, it seems to me that the profession cannot commit themselves to the service.

If we are allowed at any future date to negotiate with the Minister the responsibility of the profession in the service should be defined. It would be a great mistake in strategy if we allowed ourselves to be blamed for any failings of the service for which we were not responsible.—I am, etc.,

London, W.1. WILFRED SHAW.

SIR,—In addition to the National Health Service Bill (Bill 94) the Ministry of Health has also published a "Summary of the Proposed New Service" (Cmd. 6761). The latter document is misleading in many points. For those who will prefer the summary to the Bill—the majority by reason of the greater intelligibility of the summary and the doctors from pressure of clinical engagements—a word of warning is necessary. Some of these points are:

1. Summary, Sec. 20. ". . . the Minister is to consult . . . bodies representative of . . ." The Bill, 1st Schedule, commits the Minister to consultation only with ". . . such organizations as he may recognize as representative. . . ."

2. Summary, Sec. 24. There is no hint in the Bill of the intention that "Regional Boards, with their local Management Committees, shall enjoy a high degree of independence and autonomy within their own fields." Since it is not in the Bill the Minister cannot be held to the fulfilment of this "object."

3. Summary, Sec. 33. "Before making regulations he [the Minister] will consult . . ." This is nowhere mentioned in the Bill.

4. Summary, Sec. 41: "Professional" members of the [Executive] Council. These members are not "appointed by the local doctors, dentists, and chemists through their own representative committees," but are appointed by a committee which the Minister "may recognize" where he is "satisfied" that such committee "is representative" (Bill, Sec. 32 (1), and

5th Schedule). There is a discrepancy here which does not favour democracy.

5. Summary, Sec. 44. There is no mention in the Bill of such freedom to continue private practice.

6. Summary, Sec. 46. There is no mention in the Bill of "consultation with the doctors' professional representatives" in respect of terms and conditions of service or of remuneration.

7. Summary, Sec. 56. No mention occurs in the summary that doctors using the health centres will pay for them.

It is a remarkable summary that, apart from errors of omission, includes by accident or design items not to be found in the document it purports to summarize.—I am, etc.,

Portsmouth. NIGEL CRIDLAND.

SIR,—Now that the National Health Service Bill is published and we know what the Minister of Health contemplates, I should like to bring forward again a suggestion of mine that was published in the *Journal* two years ago and subsequently brought before the Panel Conference and the Insurance Acts Committee. It is that if we are going to be remunerated, as outlined in the Bill, by a basic salary and capitation fee the acceptance of the salary should be optional. Those practitioners who took no salary should be free to practise where they chose without asking any permission and the capitation fee should be higher. They should be free from having patients put on their list by an allocation committee, except in exceptional circumstances, and these practitioners at least should be allowed to sell the goodwill of their practices. This method of remuneration should also be applied to any practitioner who had been paid by a salary but, in an agreed time, had failed to obtain an adequate number of patients on his list. At any rate, some regulation has to be made to prevent a practitioner drawing a salary and, voluntarily or otherwise, taking too few patients on his list.

This scheme, if adopted, would get rid of one of the great objections to the Bill—namely, direction of doctors. There would be no direction, only the permission of the administrative authority if a new entrant into the service wished to receive a basic salary. This is perfectly reasonable with a view to getting a proper distribution of doctors. At the same time it would protect the "sitting" doctors from having a subsidized doctor setting up practice when there was no scope for another in the area. I recommend the idea to the Divisions of the B.M.A. for discussion in their areas. If we cannot get the idea of a salary completely removed, surely we can hold out for this modification.—I am, etc.,

New Malden, Surrey. H. R. CRAN.

SIR,—My general reactions to Mr. Bevan's Bill are entirely favourable, and I sincerely hope that the compromise reached will commend itself to the majority of the profession. Mr. Bevan has given way on a matter of fundamental principle, however, about which I feel most strongly. In my opinion the 100% service has no place whatever for payment of fees and private practice. Under the Bill everyone may obtain all medical services free, but may, if he likes, elect to be a private patient outside the scheme, paying a fee to his doctor. This will mean the continuation of two forms of medical service as at present, greater attention and civility being paid by the doctor to his private patients. This will undoubtedly cause jealousy and friction between the different classes of patients, which will be most regrettable. The obvious inference is that the patient who pays does so because he thinks he will receive better service. Such an assumption will damage relations between the profession and the public.

I should have liked to see the question of money in the doctor–patient relationship entirely eliminated, just as it has been in the existing public health services. As a tuberculosis officer I see all classes free, explaining, if I am offered a fee, that I am paid out of the rates and taxes and the patient is already paying me.

Of course, this anomaly may disappear in time, when the public discover that the best possible service is really being provided free. If, on the other hand, the private patient continues to receive preference through the offer of a bribe to his doctor the whole basis of the new service will be undermined. In my opinion this concession to the profit motive should be eliminated now.—I am, etc.,

Bishop Auckland. WILLIAM D. GRAY.

SIR,—I should like to say a few words on the unpopular side of the State medical service question. I feel sure that it is a disgraceful and deplorable thing that the organized medical profession should be preparing to resist the establishment of a State medical service by methods of obstruction. This is most undemocratic, and while there might be justification for similar action in economically less fortunate groups, I can see none in a profession which has always been comfortably endowed with this world's goods. If we really feel that the provisions of the new legislation are unfavourable to either our patients or ourselves our remedy is in the use of our not inconsiderable influence in Parliament to bring about modification, not in seditious efforts to sabotage the scheme in advance. So far as I have seen most of the objection to the scheme arises from fear of pecuniary loss, not from fear of worse service to patients.

I have always been, and still am, a Conservative, and as such I view the potential creation of thousands of bureaucrats and millions of forms with distrust, but I still feel that the benefits to both patient and doctor show a balance in favour of State medicine.

May I conclude by remarking on the following (to me) extraordinary statement of your correspondent Dr. MacDonald (*Supplement*, March 16, p. 62): "Those who qualified during the war years and have never known anything else save discipline of the Service or E.M.S. type; this group have nothing to lose, and are, therefore, in my opinion, not entitled to vote on such a tremendous issue." Surely those people whose judgment is unbiased by fear of personal loss are best able to decide freely what is best for patient or practitioner. Surely those with anything up to 40 years of practice to go are more entitled to vote on the conditions thereof than those with shorter periods. Surely those who have already (in the Services and E.M.S.) experienced a State-run medical service are best qualified to speak for or against.—I am, etc.,

Belfast Hospital for Sick Children. J. LAWRENCE HENRY.

SIR,—Why not let us get this State service down to a simple business level, and find out what we are expected to do and what we are to be paid for doing it? Until we know these facts we cannot even begin to discuss acceptance or refusal; neither can we be expected to accept or refuse until we have been given a reasonable time to discuss the details after we have received them. At present we appear to be in the position of the poor innocent who pays away his birthright on the promise of a gold piece. Why side-track the issue by talking about our honourable profession and our duty to the public, etc.? Everybody is agreed on that, but it doesn't interest the Minister of Health one little bit.

Although representatives of our profession and of the hospital authorities have known the details of the White Paper for some time they have been unable to organize any action because they had been sworn to secrecy by the Minister at their interviews, which sounds rather like the old confidence trick.

There is no question of refusing to attend the sick, who could, and undoubtedly would, pay for our services, but before we agree to sign away every atom of independence we shall be more than foolish if we do not insist on a definite financial contract for definitely agreed terms of service, and until this is settled, to treat all patients as private patients. I suggest that we take no notice of the Health Bill at all until a proper contract is put before us, giving in detail our work, our responsibilities, and our pay. Most of us are family men with many responsibilities, and we cannot afford to leave this most important matter to chance. No one wishes to oppose the Bill, but even doctors must live, although the general public has not the slightest knowledge of how they do, and cannot be expected whole-heartedly to support us in any action we may take. This is *our* affair, and we must be prepared to conduct our own business ourselves and until a satisfactory arrangement is arrived at I can see no reason why the amounts of the patients' receipted bills should not be refunded to them by the Minister of Health.

As regards direction, certainly let us agree, when we have been assured that every miner, dock labourer, and every other working man will be subject to the same direction. We are told that we are living in a democratic country with equal rights for all. In the meantime, let the Minister offer a lump sum as

a transfer fee for a specified number of years in an undesirable district. There are many doctors who don't care where they live and would be glad of the money. On the other hand, there are others who would be quite unsuitable temperamentally in such districts.—I am, etc.,

Hove, Sussex. JOHN PAXTON.

SIR,—I have been a G.P. throughout the war and for four years before ; I was also a medical officer in the Royal Navy previous to that—i.e., in peacetime. I mention these facts so that it may be realized that I have experience as a G.P. and also as working for an employer—the Admiralty. With regard to the latter it should be remembered that it was in peacetime ; in war our outlook is a bit different, I think, owing to patriotism and a job to be done.

Not all of us, I feel sure, have had time to study the National Health Service Bill sent to us by the B.M.A., nor have we had time to read the leading articles in newspapers of different political views. However, the whole matter is very urgent, and in the little time at my disposal I have formed the opinion that if the Bill is passed as now presented to Parliament things would be satisfactory for the public and for us in the main ; but I feel convinced that if the Bill is passed as it is, or even with some modifications, it will be only a short time before all doctors—G.P.s, Service M.O.s, etc.—are under complete State control, which means that we should all be working for an employer. As one who has had experience I am convinced this could not be a good state of affairs for either the people or the profession.

All medical men by their very training and sense of duty to their patients should surely have a voice in these great changes now proposed. I believe we G.P.s realize that the great majority of our patients have very little idea of the revolution in medicine that may take place. We know that they would appreciate improvements, but I doubt if they would be happy with the drastic changes which, in my opinion, seem inevitable if this Bill becomes law. If a majority of doctors agree with this view it is clear that the B.M.A. should be supported in its declared policy to do all it can for the wishes of this majority.—I am, etc.,

Bristol. H. W. STRONG.

SIR,—Arthur Koestler in his broadcast "The Challenge of our Time" dealt with the dilemma between principle and expediency. The conflict now facing our profession can only be successfully resolved by sticking to principles, while being guided, however, by intelligence and practical politics.

We have now before us the Government scheme and the B.M.A.'s views. As to the general practitioner service, it is not enough for the Council to maintain that the buying and selling of practices should not be discontinued, without giving an alternative solution. No amount of money spent on propaganda will avail unless the importance of the freedom of the doctor is pressed home with constructive suggestions on how the profession can implement this liberty in the present mood of the Government and the public. We can maintain our freedom only so long as we have the right to buy and sell our practices. This right is the alpha and omega of our independence. Do not let us give up our birthright for a mess of pottage of £66,000,000, because we shall then have no freedom, certainly no money, but only the mess.

I propose that a finance board be established by the B.M.A. with £1,000,000 capital ; further moneys could be arranged through the banks or one of the Government finance corporations at the rate of about 2½%. It would perhaps require a few million pounds before the scheme became self-supporting. If the establishment of this board proved difficult a special finance board under the Act with 50% medical representation would be a suitable alternative. The board would finance any doctor who wishes to buy a practice with a loan at 3½%, with repayments over twenty years or less of capital and interest. An insurance policy should only be required to cover perhaps 20% of the loan. No doctor could cavil at such terms, and there should be no difficulty for anybody, willing to succeed, to repay within the time. If the building societies with their heavy overheads can do it at 4% I am sure that this scheme can be made to succeed financially and would also absorb the doctors available by limitation of lists of patients, would encourage partnerships and group practices, and would satisfy the public that the poor doctor has his chance and is not being exploited.

Such a scheme would at one stroke fulfil Principles I to V, and I feel sure that in a referendum of the profession even the doctors from the Services, who are anxious for security, would vote for it rather than for a full State service ; and the profession as a whole could be united to make a stand on such a line to fight for our freedom and to carry on the best traditions of our service.—I am, etc.,

Hendon, N.W.4. EDWARD BARON.

SIR,—We have had utility furniture, mugs, clothes, and suchlike and we have used them hoping for better days. Now we are threatened with utility doctors, and permanent at that. So far as I can see there will be little inducement for the really able and ambitious young man to settle in general practice, though the specialist and expert may get into assured positions without exercising that sense of responsibility and legitimate competition which leads to progress. I would like to see a determined effort made to make the Bill a real health measure, which would satisfy all parties and leave the profession to decide their own affairs, which the public cannot do.—I am, etc.,

NORMAN MACFADYEN.

SIR,—I pointed out in a letter in 1943, when the National Health Scheme was in its infancy, that the question of the doctor's remuneration should be one of the first considerations. Even now, at this advanced stage, there is an extraordinary reticence on this very important point. The only inference is that this remuneration will be extremely small. In order to increase production it has been suggested that overtime work should not be subject to income tax. On the other hand, in the new health scheme the doctor is subject to surtax at a much lower level than the prevailing rate. He is to have a fixed salary which we fear may be small, and a capitation fee which decreases as the number of his patients increases.

Mr. Bevan has preached "go-slow" tactics to his miner friends for many years, but these methods applied to the medical profession can only benefit the lazy and inefficient doctor at the expense of the patient. Believe me, the profit motive is far less of an evil than frustration and apathy.—I am, etc.,

Camberley. LESLIE HARTLEY.

Compensation under the Bill

SIR,—Regarding the Government's proposed scheme for compensation, when I was demobilized I wrote to Mr. Bevan. I explained that I had been in practice on my own account in London prior to the war but that I had disposed of the practice before joining the R.A.M.C. I asked for some guidance as I could not support a wife and family on an assistant's salary, and did not want to invest my hard-earned savings in a practice if the capital was to be lost in the Government's scheme. About a month later, in January, I received a letter that the Minister could give me no information. As I could not afford to be idle I then bought a practice.

The Government now proposes to give 2¾% on the capital value—i.e., about 1½% net. So a doctor who has a practice with goodwill valuation of, say, £4.000 is to receive a net amount of £60 per annum from a grateful Government, who will take over his capital and only return same when he dies or retires. What other section of the community would stand for such arbitrary treatment of their savings ? Why only doctors ? Surely the logical step is to tie up everyone's savings in a similar manner and give them 1½% net. Are doctors the only ones chosen forcibly to lend their savings to the Government ? This savours not a little of dictatorship.

It is now up to the B.M.A. to take a firm stand and resist this monstrous proposal. If we are to lose the capital value of our practices, then we must be fairly compensated in cash and allowed to invest where we wish. It is a very short step from Mr. Bevan's proposal to the forcible appropriation of all capital by the Government at 2¾% gross.—I am, etc.,

MARK J. BRADLAW,
Late Capt., R.A.M.C.

Birmingham.

Survival of Cortical Bone after Grafting

SIR,—The present knowledge of bone grafting is shortly and ably summarized by Mr. David Brown (March 16, p. 389). The method employed for restoration of the mandible by Mr. Cope and me at the 3rd London General Hospital during and after the 1914–18 war may be of interest and worth further examination. In our final operation, arrived at by trial and error, we attached considerable importance to the retention of the periosteum upon the bone graft with the idea that the nutriment for the cells and the blood supply could be more quickly established. Our conclusions were based upon clinical experience, for we have not undertaken any experimental work; this should be of value if attempted.

The circumstances were unusual, for the 3rd London General was the last military hospital treating jaw injuries to be closed and the cases still under the care of the War Office were transferred from other centres to it. Among those cases were many of severe injuries needing bone grafting, several of which had previously had grafts which had not been successful for various reasons, of which infection was the most common. The following are the chief points we emphasized.

In the first place the area was rendered free from infection. A series of small operations using a local anaesthetic were carried out to remove as much scar tissue as possible and to obtain a smooth and cleapsable skin surface. At the same time every effort was made to obtain as good a vascular bed as possible for the reception of the graft.

The iliac crest proved the best site from which to obtain the bone for the graft for several reasons, among which its more spongy nature than that from such sites as the tibia was regarded as important. The graft was cut sufficiently thick to include cancellous bone.

We thought some degree of rigidity was necessary, and although we made transverse saw cuts into the bone of the graft in order to make it flexible the periosteum retained the fragments in position. It has already been said that we regarded the periosteum as important in establishing nutrition of the graft in its new surroundings.

We also endeavoured to embed the graft as rapidly as possible so that the minimum time elapsed between the preparation of the graft and establishing it in its position. The reception area was prepared in every detail before the iliac crest was approached. The wound in the latter was closed after the grafting operation had been completed.

We satisfied ourselves that the graft survived, if not entirely at least in part, for considerable gaps were bridged, and it seemed hardly possible that the restored tissue had been permeated by cells from the bone of the recipient area, or that they were derived from the mesenchyme celis as suggested by Leriche and Policard.

The longest graft, 4½ in. (11.25 cm.), was inserted in the chin area, where two previous attempts at grafting had failed. The result has been excellent; this patient has been seen within the last week or two.

A factor which adds to the difficulties of mandibular bone grafts is that the functional conditions of the mouth demand some movement of the mandible, and although absolute fixation is impossible the retention of the graft in position without stress needs to be effected as fully as possible. This is certainly assisted by the insertion of a carefully moulded bone graft with the periosteum attached. Greater details with illustrations are given in *Injuries of the Jaws and Face*, by W. Warwick James and B. W. Fickling, pages 176 to 185.—I am, etc.,

London, W.1. W. WARWICK JAMES.

The Health of India

SIR,—With reference to Sir John Megaw's lecture on the health of India (March 9), in view of the unlikelihood of any diminution in the rate of growth of the population of India occurring in the near future one would like to be assured that energetic measures are being taken to maintain agricultural production by the Governments concerned.

To those who have flown along India's eastern coastline and travelled in other parts of the subcontinent, the effects of soil erosion must be only too obvious. Such effects are evident, if not severe, in all places, from the dry windswept Tibetan plateau, through the "gullied" base of the Himalayas, the advancing edge of the Sind desert, the dust storms of the United Provinces, the severe floods of Bihar and Bengal (Burdwan, 1942), to the alternating wind and "sheet" erosion of Southern India. Is a sufficiently vigorous policy being directed to reduce the loss of cultivable land from this cause? Could not more be achieved than at present by means of propaganda among the zamindars and those cultivators returning to their villages from the ranks of the wartime Indian Army, and by large-scale Government-sponsored schemes aiming at soil preservation and reclamation?

Although this subject is perhaps a superficial aspect of the problem in comparison with the greater issues raised by Sir John Megaw, its importance should not be neglected. A campaign of propaganda combined with suitably widespread Government soil-preservation schemes would attract the attention of Indian cultivators to the immediate problem in a practical and therefore understandable way. Such a campaign would be immediately practicable and might lead the way to the Indian landowner and peasant beginning to understand the deeper problems and the "need for a new outlook." Could not a people who once learned to preserve and reverence their most important domestic animal, the cow, in another critical period of their history learn to preserve and respect their soil, and perhaps acquire thereby a greater sense of responsibility through understanding the urgent need for this?—I am, etc.,

ROBERT WIGGLESWORTH, Major, R.A.M.C.,
Late D.A.D.M.S., 14th Army, and A.D.M.S.
Catterick. Allied Land Forces, S.E. Asia.

Congenital Malaria

SIR,—During my fourteen years' sojourn in Malaya, where not infrequently one had to deliver a woman while she was in the middle of an attack of benign or subtertian malaria, I became interested in the possibility of the occurrence of congenital malaria. In an attempt to prove that the parasite was capable of passing from mother to child, it was my custom to take films of the infant's blood as soon as it was born. In no case could I find parasites, nor could the experts at the Institute for Medical Research, Kuala Lumpur, who kindly checked some of the films for me.

I have seen babies aged 14 to 21 days with malaria, but with them there was always the chance that they had been bitten by infected mosquitoes shortly after birth. More weight would be attached to the findings of Profs. A. Eckstein and W. C. W. Nixon (March 23, p. 432) had they obtained positive films immediately after birth instead of twenty or more days later.

If obstetricians in malarious regions adopted a routine of taking blood films immediately after birth the possibility of the occurrence of true congenital malaria could easily be confirmed or denied.—I am, etc.,

Edinburgh. I. G. CAMERON.

Malaria Parasites in Thick Films

SIR,—Our copy of the *Journal* of Jan. 5 has just reached us. We have read with interest the article by Dr. K. B. Rogers on concentrating malaria parasites in thin films (p. 11) and wish to make the following comments.

We agree whole-heartedly that, as there will be many cases of malarial relapse in the next few years, accuracy and speed of diagnosis are essential. We are not prepared to admit that the technique described by Dr. Rogers has any advantages over that which is known as the thick film technique. In the first place, the discomfort to the patient caused by obtaining blood by venesection is considerably greater than that caused in preparing a smear. Secondly, the time involved in this technique must be somewhere near an hour and it demands certain items of equipment which may not be readily available. By the thick-film method no additional equipment is required, and by rapid staining methods the film can be stained and reported on in ten minutes. There is no need to emphasize that speed in diagnosis is very important in dealing with malaria (especially of the malignant tertian variety) and the saving of time in any laboratory procedure is surely advantageous, provided the rapid method is equally accurate. Dr. Rogers has not proved to our satisfaction that his method is more effective in securing concentration of parasites.

In the third place, the excuse that some pathologists do not like thick films is one which we know to be true, but we are not wholly in agreement that the thick-film technique is very difficult. We teach this technique to medical officers and to malaria survey technicians in the space of two weeks. To

quote from Aimee Wilcox's admirable monograph: "Practice and experience are necessary to become proficient in the interpreting of thick films, for they are different in appearance from thin films and, at first, may be confusing. However, the ease with which the parasites can be found in the thick film after a long, unfruitful search by the thin-film method is ample recompense for the time spent in learning the technique." It is considered that it is not beyond the capabilities of the pathologist (who in these times of rapid scientific advances has to master many and much more complex techniques) to familiarize himself with the technique of thick films. If he does so he will agree, as we do, with Aimee Wilcox when she writes: "It has been repeatedly observed that when a person has learned this technique he has no desire to return to the thin film for diagnosis."

If it is argued that the facilities which exist for the study of malaria parasites is in any case very limited in non-malarious countries, then surely there is no more or less opportunity of studying thin films than there is for thick. Careful conscientious examination of the thick and thin films side by side will soon familiarize the individual (especially a trained microscopist) with the appearances of the malaria parasites in thick films.

We lament, with Dr. Rogers, the faulty nature of some of these smears which are sent for examination; if an awakening in the teaching of tropical medicine is indeed in progress, in our opinion the teaching of the thick film in the diagnosis of malaria must have an exalted place.—We are, etc.,

R. J. T. GARDINER.
N. W. HORNE.

Malaria Wing, Royal Air Force, S.E.A.A.F.

REFERENCE

Wilcox, A. (1942). *Manual of Microscopical Diagnosis of Malaria in Man*, Nat. Int. Hlth. Bull. 180, U.S. Publ. Hlth. Serv., Washington.

Diagnosis of Amoebiasis

SIR,—Surg. Lieut.-Cmdr. W. E. Kershaw (March 2, p. 305) and others who have written concerning the above subject have done well to stress the importance of it. Quite a large number of these patients have few symptoms and no signs. Now that so many troops and ex-P.O.W.s are returning from the Far East it is particularly necessary to exclude amoebiasis. We found in the Middle East that it was possible to diagnose amoebic hepatitis in its early stages by screen examination of the diaphragm. By screening the diaphragm hepatic enlargement could be reported with assurance although the patient had sometimes merely been sent for routine exclusion of phthisis. A raised right (or left) dome with diminished movement is the earliest sign. This is followed by "humping" of the dome due to abscess formation. Pleural effusion, mentioned in Dr. Kempton's letter, is a late result. There are probably many soldiers walking about in peril of all the dangerous sequelae of the disease; I know of one who certainly lost his life owing to failure in recognition of this unfamiliar complication.

The dangers were pointed out in my "Note on Amoebic Hepatitis" published in the *British Journal of Radiology*, January, 1943. I would plead for a more careful *x*-ray examination of the domes of the diaphragm in men returning from the East when a positive diagnosis cannot be made. A rare complication, amoebic perinephric abscess, is worth bearing in mind. I saw two such cases, one of which was demonstrated prior to treatment by radiological methods and also the cure after the injection of emetine.—I am, etc.,

Liverpool. JOHN A. ROSS.

SIR,—I was a colleague of Surg. Lieut.-Cmdr. Kershaw when he was preparing his paper on amoebiasis (March 2, p. 305). He was the pathologist and I was the psychiatrist in charge of neurotics. Although many of my patients had bowel neuroses, none of them was labelled "amoebiasis," by good fortune. But I had bowel neurosis, too, though the symptoms of anxiety hysteria attaching to it had their activity—pseudopodia, R.B.C.s, and chromatin dots—demonstrated microscopically to me before I retired hurt. Emetine and E.B.I. resulted in cure without catharsis, psychological or physical.

Had Dr. J. J. Kempton (March 23, p. 445) heard the "drips" from all M.O.s about our pathologist returning anything up to 32 stool results with the words "Indefinite, please repeat," he could be sure that the final diagnosis was not lightly made. Amoebiasis is endemic in Ceylon. We Europeans certainly supplied the local epidemics of which Dr. Kempton speaks. The difficulty is to remember which members of our mess *didn't* produce actively motile, R.B.C.-ingesting, chromatin-dotted "neuroses" for Dr. Kershaw's microscope. In Ceylon the dissemination of expert instruction in amoebic diagnosis would fill every bed in the island instead of rapidly killing the "epidemic." I think that conditions must be very different in Malta.

As an inconsequential postscript may I say that I laughed a bit at Dr. E. S. Lower's case of leucotomized Parkinsonism (March 23, p. 447), whose reintegration of personality and well-being after operation were so good that she was only prevented from assisting the national drive for prosperity by having become, in the interim, doubly incontinent.—I am, etc.,

Caterham. J. M. CRAWFORD.

Ocular Signs in the Prisoner of War from the Far East

SIR,—I think that a plain statement of the facts will help to clear the air in this matter. After the capitulation of Singapore I was not interned by the Japanese for over a year, and along with a few other European doctors continued more or less normal work among the local population, under altered and difficult conditions. Within a short time the prices of meat, fish, eggs, fats, fresh and dried beans rose so high that many people were unable to obtain them. In July, 1942, I began to see cases of what I think is best described as "deficiency amblyopia."

There was no specific fundus abnormality; the defective vision, always bilateral, was due to centro-caecal scotomata of variable depth and type but all corresponding roughly to what one was accustomed to find in tobacco amblyopia in Europe; tobacco amblyopia is hardly ever seen in Malaya in normal times. The amblyopia, however, was by no means confined to tobacco smokers. Women appeared to be in a minority; children did not come for treatment. The youngest patient I had was a boy of 15.

Most cases, but by no means all, showed excoriation at the canthi, nares, and angles of the mouth, with raw tongue and sometimes scrotal or labial eczema. Many patients had also suffered recently from beriberi and had recovered under treatment.

The worst cases were among Indian troops, some of whom Capt. Khanna, I.M.S., brought to see me, severely paralysed by beriberi, but having developed amblyopia some months after the onset of the former. Capt. Khanna informed me that in one camp alone 800 Indian troops were affected by amblyopia. These were non-collaborators and were very badly treated by the Japanese. According to Dr. Lai En Fo, our laryngologist, there was a laryngeal paresis associated with food deficiency, but these cases did not develop amblyopia so far as I am aware.

Among internees (and probably, too, among the local population), especially in the latter half of the occupation, subcutaneous haemorrhages and friction blisters were common, also submucous haemorrhages of the mouth and pharynx; these were not accompanied by any specific ocular complication. Ocular vitamin A deficiency showed itself in the early days of the Japanese occupation only, as adult keratomalacia among homeless and starving Indian deserters. Infantile keratomalacia, curiously, disappeared as soon as poorer-class mothers could no longer afford to buy sweetened condensed "full-cream" milk, almost invariably the sole diet of those cases of infantile keratomalacia, so frequent in Singapore in normal times.

Much has recently been written of a limbal vascularization ascribed to ariboflavinosis; I have used the slit-lamp daily for many years, with particular attention to the limbus, among a population peculiarly afflicted by deficiency diseases, without ever becoming aware of such a condition. Vitamin C deficiency was never prominent, and caused no ocular changes to my knowledge.

Treatment of the amblyopia was very unsatisfactory; the use of an extract of rice polishings gave no definite results; standard vitamin preparations were generally unobtainable, and few of the patients could afford to improve their diet. Not even all of those who could do so showed visual improvement. After some months, where recovery did not take place, an optic atrophy occurred.

Meantime, about December, 1942, cases began to occur among civilian internees in Changi Gaol. These early cases were severe from the start, and were generally among heavy smokers. My colleagues, Drs. Lowther and Stanley (the latter died later in the hands of the Japanese military police), carried out detailed investigations of these cases among civilian internees throughout the occupation, and I expect that later Dr. Lowther will publish their findings. There was then a lull in these cases in Changi Gaol until June of 1943, when some 100 cases occurred over about two months; these were nearly all very mild and practically all recovered with

what increase of diet was available, plus marmite. All were asked to stop smoking, but many recovered without doing so. From then on only sporadic cases occurred. There were very few cases throughout among women. I have heard that most of those who returned to this country have shown a remarkable recovery, even those who had a well-developed optic atrophy.

The lack of some essential food factor is obvious in these cases. I do not wish to labour unduly the bearing of tobacco amblyopia on this question, except to point out that ophthalmologists generally recognize that tobacco amblyopia is a deficiency disease. The fact that Major H. Goldsmith (March 16, p. 407), using a limited number of vitamins and vitamin-containing substances, was unable to obtain therapeutic success is not a sound reason for ruling out avitaminosis as a cause. It was found, however, impossible to implicate any known vitamins, individually or collectively, from the closest study of the diet in the internment camp. Years of practice in a city where beriberi is common have not made me familiar with what Major Goldsmith refers to as the "true retrobulbar neuritis" of beriberi, nor with the optic atrophy to which he states it invariably leads.—I am, etc.,

Glasgow. A. D. WILLIAMSON.

Ocular Signs of Vitamin Deficiency

SIR,—My attention has been drawn to the statement under the heading "Ocular Signs of Ariboflavinosis" (Dec. 22, p. 889) that corneal vascularization "has been noted as a result of vitamin-A deficiency." Since the author lists it among a group of diverse conditions productive of corneal vascularization, with intent to illustrate the protean nature of this phenomenon, it is presumably not his wish to emphasize a connexion. On the contrary his thesis, most laudably, is concerned with stressing how carefully the cornea must be examined with the microscope if the true B_2 type of capillary invasion is to be distinguished. Still it is perhaps permissible to question the soundness of the evidence on which such an observation concerning vitamin A is based. I have not seen any pathognomonic corneal vascularization in the examination of large numbers of cases of predominant vitamin-A deficiency in Southern India over a number of years. Nor apparently was it recognized in China or Japan when I visited ophthalmic clinics in these countries, where gross evidences of this deficiency, ocular and general, were quite common.

Let us hope we are nearing the time when it will be usual for the diagnosis of vitamin deficiencies to be confirmed in the laboratory and expressed for us by the biochemist in quantitative terms. This should preclude waves of indiscriminate vitamin therapy fostered by the popular press and diagnoses encouraged by suggestive environmental conditions but based on inadequate clinical evidence, such as we have experienced in the last twenty years.—I am, etc.,

Fleet, Hants. ROBERT E. WRIGHT.

Empty Maternity Beds

SIR,—Thousands of young English mothers are suffering great distress of mind not knowing where to have the wished-for babies that followed the happy return of their husbands from the war. Personal knowledge of several tragedies in which a mother or child was lost who would almost certainly have been saved had a hospital bed been available compels me to the last resort of writing to ask if anyone can put forward a quick and practical suggestion for securing the reopening of the thousands of maternity beds recently shut down for lack of nurses and staff. Properly equipped beds in institutions are empty when the demand is greater than ever before for obvious reasons—unsuitable homes or no homes at all.

The lack of British nurses to staff the institutions cannot be remedied for a year or two, or so we are told. Is this true or could the problem be tackled by a sufficiently determined lead? If it is true that it is impossible to get enough British women to come to the rescue of their sisters in their need, then could not the B.M.A. approach the Secretary-General, International Red Cross, to try and raise an international company of trained nurses for temporary duty in our maternity institutions? Personally I have had experience of New Zealanders and Swedes and found them second to none. Language is no insuperable barrier in institutions where there would be English nurses as well; 50% of the patients do not speak any language beyond a cry, and they make more than half the work.

Workers in obstetrics know the anxiety and unnecessary suffering of the young mothers, who are powerless to help themselves. The great majority of people do not see all this and therefore pass by unheeding. The rapid downward slide of the maternity services during the past six months is caused by lack of nurses due to many causes. The foremost cause is overwork due to understaffing—inability of administrators to realize the arduousness of the work and to remember that each case means two persons to nurse. Any man or woman who can now devise a practical and speedy plan for securing ample staff to reopen and extend our maternity institutions at once will be a great benefactor.—I am, etc.,

E. LAWTON MOSS.

Contraception and Infertility

SIR,—The leading article on the above subject (March 23, p. 438) refers to certain animal experiments which were reported by me in the *Proceedings of the Royal Society of Medicine* in 1943. These experiments, which have since been repeated, demonstrated that under suitable conditions more than two-thirds of immature spayed or unspayed rabbits, rats, and mice show a marked increase in size of the uteri and genitalia after parenteral injection with normal, healthy, fresh human semen. Like Sharman *et al.* we also had our failures. In view, however, of some new research work over the last two years, which is shortly going to press, we are now confident that the reason for our failures—and maybe for Bacsick, Sharman, and Wyburn being unable to confirm our findings—is that like ourselves on occasions they were using human semen as supplied from laboratories and sterility clinics. Such semen, of course, not only varies greatly in its cellular content but is stale and subject to gross alterations and decomposition. Therefore we abandoned this technique and have used only the freshly collected homologous semen of rabbits in our new series of experiments. This semen was injected intravenously, thus eliminating another possible source of error arising from the injection of a heterologous semen containing foreign protein. Briefly stated, our new experiments show without question an increase in size of the uteri of immature spayed or unspayed rabbits. Furthermore, we frequently noticed enlargement of the ovaries in unspayed rabbits, which was due partly to increase in size of the follicles and partly to hypertrophy of the interstitial tissue. Whether this important property or side-effect of semen is due to a hormone or to the synergistic action of some absorbed chemical compound remains to be determined. We hope shortly to publish this series of experiments with their respective photomicrographs as this work may be of importance in the solution of the present problem in *homo sapiens*.—I am, etc.,

London W.1. V. B. GREEN-ARMYTAGE.

Spinal Analgesia in Operative Obstetrics

SIR,—As one of the first English surgeons to use nupercaine, and the first to introduce it into India after a visit to Vienna in 1929, I have followed the recent correspondence on the subject of spinal analgesia in the *Journal* with much interest. My experience of it in operative obstetrics was small but satisfactory, whilst I used it for practically all gynaecological operations for many years, administering it myself or very closely supervising assistants in its injection in a series of over 3,000 operations.

Its most conspicuous advantage is the wonderful facility with which the subsequent operation can be carried out owing to the perfect relaxation obtained, in contrast to the exhausting tussle needed when a locally available anaesthetist "assisted" with general anaesthesia "as understood." The operative procedures were thus rendered far safer for the patient by being performed under the easiest and most satisfactory physical conditions, and the prolonged subsequent analgesia, often lasting for two or three hours after the patient had been returned to the ward, was a great boon to her (and to the overworked nursing staff). I admit we lost two cases, due to sudden and overwhelming fall of blood pressure, in spite of the usual precautions and countermeasures; both were old women with large ovarian cysts—in

such, where no question of need for relaxation arises, local or light general anaesthesia is to be preferred.

Three points I would like to emphasize:

1. Always give the injection yourself; the technique, to give uniform results, must be absolutely standard to the operator and 100% constant and reliable.

2. On the slightest sign of anoxaemia get the attendant anaesthetist to give a few breaths of oxygen. The first sign is a slight uneasy movement of the patient's shoulder, arms, or head and increased movement of the chest.

3. Use the beautiful Vienna (or Duttner) needle and thereby save both yourself and the patient from subsequent headaches! —I am, etc.,

W. C. SPACKMAN,
U.N.R.R.A. Regional Medical Officer.

Florence.

Quinine for Induction of Labour

SIR,—Those of us who know Dr. E. K. Mackenzie, whether personally or by reputation, are quite willing to concede that he has achieved much with the tools at his disposal, but it is somewhat disconcerting to find him frowning on the begowned and begloved obstetrician (he has omitted the bemasked). Personally I have attended over 2,500 midwifery cases during the last twenty-five years with only two maternal deaths, and no death from sepsis. I wish therefore to make the following testimony.

In the practice of domiciliary midwifery the nearer I could approximate arrangements and technique to hospital conditions the greater the margin of safety I secured for my patient. Begowned, begloved, and bemasked I have felt as confident in the home as in the hospital, provided other facilities have been adequate. For more than twenty years I have had access to hospitals for medical, surgical, and obstetric work, and I am convinced that the experience gained in hospital has enabled me to maintain a higher standard of care (in domiciliary practice) than would otherwise have been possible.

I have some respect for the use of quinine in midwifery, but one has to concede that for some mothers it is not devoid of risks. It is unreasonable to suppose that there may not be similar risks to the child, although in the limited use that I make of it I have seen no untoward effects. When induction becomes imperative other and more reliable methods should be used, but these methods should certainly involve the use of gown, mask, and gloves—in fact, a complete surgical ritual. Quinine may, however, be used in the case of a healthy mother at term where for good reasons it is desirable to initiate labour within a prescribed time. It is then a convenient therapeutic measure.

Dr. Mackenzie's induction figures perplex me. Does he mean that in 647 cases he has deemed it prudent to induce labour? He has probably attended twice as many cases as I have. Even so his induction rate is some twenty times my own. He will forgive me if I wonder if his enthusiasm for quinine has somewhat blurred his prognostic acumen.—I am, etc.,

J. MACLEOD.

Fraserburgh.

SIR,—Mr. F. Neon Reynolds (Feb. 16, p. 257) wrote that the use of quinine for the induction of labour is a "thoroughly bad practice which is productive of many stillbirths each year." I put to him a definite question, namely, "Upon what facts and figures does he base his statement? and this request includes stage of pregnancy and normality or otherwise of case" (March 2, p. 332). I get a reply (March 16, p. 407) from Mr. D. G. Wilson Clyne, who does not answer my question, but would confuse the minds of the jury with quotations, irrelevant and contradictory, from the writings of eminent obstetricians. It is of no interest to me that Munro Kerr denies that the use of quinine has any influence on either the duration of labour or uterine inertia, or that Theobald recommends it very strongly, or that someone else has some other opinion; none of these writers state that "the use of quinine is productive of many stillbirths each year," and what I and others want to know is upon what facts, preferably from his own experience, does Mr. Neon Reynolds base his very grave statement of opinion?

Quinine for the induction of labour should be used, after careful antenatal examination and a mental assessment of the probable outcome of a case, if in the opinion of the practitioner the labour is overdue. Quinine will not, in my opinion; act, except in dangerous doses such as some misguided women use to bring about abortion, if labour is not due. It should not, for example, be used for the induction of labour in the seventh or eighth month of pregnancy in cases of toxaemia. If used for an overdue labour, in the proper manner, it will act, will help the mother with an overstretched uterus by reducing her difficulties to deliver an overdue and over-large baby; help the baby by giving it an easier and less dangerous passage into the world; and help the doctor by reducing his anxiety. Remember, to the G.P. the patient is a human being in danger, not a "hospitalized case or cipher." If out of 647 cases I use quinine for the induction of labour 105 times without a single stillbirth, and with the advantages to my patient, her child, and myself stated above, in spite of what Mr. Wilson Clyne writes I am confident a jury would consider my results very "significant" as against the unsupported statement of even Mr. Neon Reynolds.

In conclusion, Sir, I have a definite "scunner for such new-fangled notions as higher obstetric qualification, maternity hospitals, etc." It would be better were these young men trained, as I was trained, by a general practitioner in the hard school of general practice—Dr. L. B. Beddie, Fraserburgh. It would be good were such competent G.P. obstetricians asked to give occasional lectures to students, and to do a little of the examining. Hospital reports would read better, and neonatal deaths would be less.—I am, etc.,

ENEAS K. MACKENZIE.

Tain, Ross-shire.

Anaesthesia

SIR,—My letter (Feb. 16, p. 252) appears to have caused a stir. Some anaesthetists are, so far as their correspondence goes, "banded together"—to use Dr. Loftus Dale's delightful phrase (March 16, p. 408)—in order to refute the products of my "perfervid imagination." I think perhaps that Dr. Dale may have misread my letter. I expressed no belief that the new machines were in any way "lethal." The only correspondent to date who has admitted that the more simple methods might well be taught is Dr. A. H. Galley (March 2, p. 332), but only "one hospital is considering a proposal" to do this. I fully agree with him, of course, that chloroform plus barbiturate is almost always contraindicated. Their combined action may have a markedly depressant effect on the myocardium of the healthiest patient. But for Drs. Galley, A. D. H. Simpson (March 9, p. 372), and M. R. Milne (March 16, p. 408) to use the similes of stage-coach, bows and arrows, and blunderbuss, respectively, when comparing the standards of the great masters of anaesthesia of twenty years ago with those of the present day, is hardly just.

May I assure Dr. Simpson that I have never met anyone who thought that avertin had any place as a general anaesthetic. My championing of it as a basal anaesthetic only was, I had hoped, understood. May I give Dr. Milne a friendly tip. Over a fairly long series of cases I have never had a case of "ether eyes." This may be due to luck, or the fact that a few drops of ol. ric. are put in the eyes from time to time during the operation.

The whole purport of my letter was to plead for more simplicity in the teaching and administration of anaesthesia. May I give a few illustrations?

(1) An advanced dressing station of a Field Ambulance in Holland was cut off from its C.C.S. for several days. There were, of course, no anaesthetic machines and the pentothal had been smashed by enemy action. A number of patients had to be anaesthetized. The younger medical officers, having been brought up on the "tubes, taps, and turncocks," had little idea of open anaesthesia. And so it was the "old man" who got down to it. Simple, smooth induction with chloroform and ether (C_2E_2), going over to open ether at the appropriate moment, with the usual resuscitative methods to hand, caused no one the slightest concern.

(2) Some years ago a colleague of mine had a guest staying with him who held the Diploma in Anaesthetics. They went out together to a confinement. The specialist had the same ignorance of open chloroform as Dr. Milne so joyfully proclaims, and, to quote my colleague's masterpiece of understatement, "it was a bit tricky."

(3) Mr. Alexander Lyall (Nov. 24, 1945, p. 719) in his valuable review of 480 appendicectomies says: "80% of the anaesthetics were administered by house-surgeons . . . there is nothing more injurious to a seriously ill patient than a raw house-surgeon attempting to

use one of the complicated series of tubes and dials which constitute the modern anaesthetic apparatus. My house-surgeons are *therefore instructed"* (my italics) "in the method of giving open ether . . . and this is always used in cases of acute appendicitis." As I see it these youngsters could have had no time as students to master the "complicated series of tubes and dials," and had not used open ether to any great extent, and so, *after* qualifying and while holding responsible appointments, they had to be taught, actually taught, this elementary job. "In extremely ill cases," goes on Mr. Lyall, "nitrous oxide with light ether has been given." So far as I can make out, the "extremely ill cases" number 27 out of 52 cases, all of which had spreading peritonitis. Call *all* these extremely ill, if necessary; so, presumably, 80% of some 428 cases were given open ether by house officers, with a mortality of less than 0.5%. Nearly 350 cases of varying severity anaesthetized by house officers who had been taught open ether: no rubber tubing, no spanners, no nuts and bolts, and a magnificent result in every possible way. There was nothing much wrong with the older methods there. I challenge anyone to quote a similar series with such excellent results and a lower mortality, *using any method of anaesthesia.*

I emphasize again that "the specialist anaesthetist is necessary in many of the rare and specialized operations." And I pay tribute where tribute is due to their skill and care. But one does not need a mallet to crack an egg. If the student to-day is taught the simple methods, with barbiturate premedication where possible, he would be able to maintain the same simple straightforward standards of decent anaesthesia as have been carried out by other generations. He cannot, or does not, wish to invest in the expensive machines on which he was brought up. He has known few other methods, and so he has to obtain outside help for what is, in a large proportion of cases, a simple job. This is not in the best interests of his prestige, neither is it much of a testimonial to the training and teaching he has received.—I am, etc.,

Waddesdon, Bucks. W. A. BELLAMY.

Serum Reactions in Syphilis

SIR,—In the *Journal* of March 9 (p. 353) Dr. J. H. Waelsch makes the statement "two reactions [Wassermann and Kahn] were positive, which is *generally accepted* to mean the presence of syphilis." Alas! I feel this is only too true, but the sooner the medical profession realizes that positive serum reactions carried out on a single specimen do not necessarily mean syphilis, unless there is confirmatory evidence, the better. It is to be feared that there are still many persons being treated for syphilis who have never suffered from that disease.—I am., etc.,

Horton Emergency Hospital, Epsom. T. E. OSMOND.

Physical Therapy in Mental Disorder

SIR,—This correspondence, now presumably in its closing stages was at first more than usually clouded with the controversial abstractions and imaginative prejudices that mar and degrade so many discussions of psychiatric topics.

Dr. Harvey Baird (March 23, p. 447) whom I have not been privileged to meet, shares with me, I believe, the invaluable tutelage of the late Edwin Goodall—a master of factual presentation, whose simple classification of all psychiatry into (*a*) "Talk" and (*b*) "Work" has much to commend it—as your readers will have seen. It is not surprising, therefore, that Dr. Baird has bravely, and with becoming restraint, attempted to bring this matter of physical therapy in mental disorder on to a concrete level. I share his feelings entirely, although it has taken me several weeks to acquire a comparable measure of restraint.

The concrete factual approach necessitates our knowing precisely what we mean by the data under review; and as Dr. Baird has chosen the so-called "recovery rate" as one of his principal data I venture to submit some observations on what, exactly, this figure means. I submit that it cannot be, as he suggests, a valid index of the efficacy of treatment; and as it is frequently quoted, especially by laymen, as if it were such an index, its true significance should be clearly defined.

As commonly calculated, a "recovery rate" is reached by stating, in respect of any one year, the number of patients discharged recovered from hospital (let us not be distracted by criteria of recovery for the moment) compared with the number admitted; it is usual to state this ratio in the form of a percentage. A moment's reflection will show that those discharged and those admitted in any one year are not necessarily—in practice never—identical patients. Furthermore, if the number of discharges were constant, and the number of admissions were to fall, the recovery rate would rise, and vice versa. Clearly, then, the "recovery rate" is liable to gross variation on account of factors that have nothing to do with treatment. It cannot, therefore, be taken as a valid index of the efficacy of treatment even as a whole, let alone the efficacy of any single technical procedure. For example, the number of admissions may fall because of lack of accommodation; or it may rise because many senile patients, or mental defectives, have to be admitted to mental hospitals whereas, in happier circumstances, they could be cared for elsewhere if there were proper provision for them. Such fluctuations in the number of admissions would cause, respectively, a rise and a fall in the recovery rate, even if the true recovery rate (i.e., the proportion of recoveries in an identical group of patients) were to remain constant. The matter is further complicated by the changes, proportionately, amongst the forms of illness from which patients are suffering on admission, since the inherent prognosis varies from one form to another, as Dr. Baird hints. In view of these considerations there is little doubt that the expression "recovery rate" calculated by the conventional formula would in another, and possibly more severely critical, place be designated a "misleading and undesirable" term and its perpetrators would be enjoined to eschew it.

This, Sir, is precisely what we, in the Bucks Mental Hospital, have done—at least for the guidance of ourselves and our governors, although not for the official return. We compare the total of patients discharged recovered and relieved (i.e., well enough to leave hospital and to take up their community lives again, even if handicapped in some respects) with the number admitted, and we call it the "useful discharge rate"; and we state specifically that it is a measure of the hospital's social usefulness, having regard to the psychiatric load that the community imposes, since it indicates *only* the number of patients returned to the community compared with the number received from it, and is *not* an index of prognosis nor of the value of treatment in any given group of cases, for the simple reason that it does not refer to a given group of cases.

In 1945 our useful discharge rate reached the gross figure of 63.4%, and, excluding those who were over 60 years of age at the time of admission, it was 87.8%. But our admissions (216) were the lowest in any year since 1935, although our total new case incidence (out-patients, etc.) for 1945 is estimated at 800—the highest it has ever been—drawn from a population estimated (1944) to be 360,000. Had we been doing much shock therapy in 1945, many would no doubt have fallen into the statistical trap that might have been set so easily by calling our useful discharge rate a "recovery" (or even "recovered and relieved") rate; and they might have pointed to this remarkable figure as evidence of its efficacy, instead of recognizing what such a figure is in fact—an index of the total influence on mental hospital discharges *and admissions* of all the social, therapeutic, prophylactic, and natural factors associated with a local mental health service. But we did very little shock therapy—certainly not more than half a dozen cases—during 1945. We have no prejudices about it and we are prepared to use it when it seems to us to be indicated; but we do not use it blindly, because we find that, in a very high proportion of cases, we now get as good—and as lasting, if sometimes less rapid—results by other, but not by any single, means. We are not at the moment concerned with the explanation—only with the facts. Furthermore, with a practically stationary (in the topographical sense) population we are subjected—unlike those who can roam the countryside or proceed to the metropolis to apply or enjoy (I use the term in the legal, not the psychological, sense) the benefits conferred by passing an electrical current across the cortex from an eponymous box—to the stern discipline of having our failures (and sometimes other people's too, although we haven't the heart to tell them) living at our doorstep. Viewed from this angle the long-term results of shock therapy are nothing like as impressive as some of the early, rapid, and favourable changes of phase (it is often no more) that it produces; and I should be satisfied to demonstrate to some of the less critical enthusiasts amongst your correspondents a sad series of advanced schizophrenics and chronic hysterical—obsessional—depressives who in 1938–9 and the subsequent years were held up for a time (not by us) as near-miraculous examples of what comas and convulsions can do.

Like Dr. Baird, I do not consider that any single therapy yet available will touch true, or essential, schizophrenia—still the most tragic and malign of all the psychoses of young adults. The benign schizophrenoid states (Langfeldt) should be, but often are not, sharply distinguished diagnostically and prognostically from essential schizophrenia; and much more could be said—although it seldom is—on the same lines, about the variegated syndromes within the congeries of the depressive states. I ventured to record my findings and views in this matter, based on an admittedly small series of cases, at a some-

what unpropitious time (*Proc. roy. Soc. Med.*, 1939, **32**, 843). Perhaps for that reason comparatively little heed has been taken of them; and there is still a noticeable lack of crispness of diagnostic definition, and an unwarranted prognostic optimism, in regard to the more serious schizophrenic disorders.

I can only say, now, that I find my views fortified by the experiences of the intervening years, and extended, as regards shock therapy, to many other kinds of psychiatric illness as well. When it is clearly realized that treatment in psychiatry must always be comprehensive and can never be satisfactorily effected exclusively by pressing a switch, pushing a plunger, or even by boring a hole, whether in the skull or in the barriers of the unconscious, we shall be at the beginning of therapeutic and prophylactic wisdom; and in time we may, if it is thought necessary, be able to assess the relative value of peculiar procedures—but not by means of a "recovery rate" as now calculated.—I am, etc.,

Bucks County Mental Hospital. IAN SKOTTOWE.

Hospitals for the Aged and Infirm

SIR,—I have been greatly perturbed by the complacency with which the medical profession, and particularly those in administrative positions with public authorities, view the lack of nursing care for the sick aged and infirm. The patients I refer to particularly are those in the later and inoperable stages of malignant disease, bed-ridden heart and chest cases, and the restless senile cases and those suffering from incontinence of faeces and urine. Since last October I have tried to get some of the more severe of these into hospital. It is obvious that hospital beds are not available for "incurables" who require only nursing; what is not so obvious is why such nursing attendance is not more readily available. A request for the admission of such a case to an "infirmary" or "institution" merely evokes from a relieving officer the reply that there is a long waiting list and that there is no hope of admission for a long time. In this area three months ago the waiting list was 300; this has now gone up to 400.

Occasionally these patients can be looked after in some sort of fashion in their own homes, with the help of the district nurses. But in the majority of cases the position is not quite so happy. Often there is only the wife (or the husband) left to do everything for the patient, and very often he or she is equally aged and infirm. It is very easy for the public assistance authorities to say that the relatives must manage as best they can, but one wonders if they would be quite so complacent if they had to cook meals in the intervals between washing soiled bed-linen from an incontinent patient or sit up all and every night with a "heart" patient gasping for breath. Occasionally there are no relatives. With the best will in the world life becomes intolerable to both the patient and the relatives under such conditions when prolonged for months. I am not trying to apportion blame for this state of affairs on any particular body or bodies. The responsible authority, if there be one, appears to be shrouded in the depths of officialdom. The main difficulties would appear to be: (1) lack of accommodation; (2) shortage of staff—medical, nursing, and domestic; and (3) lack of equipment.

Accommodation.—Many suitable buildings are available. I have personal knowledge of buildings which were built especially as camp reception stations during the war. One, which I have just seen, is a brick-built structure with two large wards, accommodation for staff, kitchens, dispensary, baths (h. and c.), electric light, etc.; in fact, accommodation superior to many a cottage hospital. Many anti-aircraft gun sites have brick-built accommodation every bit as warm as some modern houses, with suitable kitchens, water supply, etc. I do not refer to isolated sites but to those situated close to large towns. Apart from these buildings there are also church halls and recreation and assembly rooms in most areas, the majority of them with kitchens attached. The requisitioning of these would necessitate co-operation between the Ministry of Health and other Ministries and local authorities. This should not prove an insuperable obstacle in these days when one dare not leave one's private residence unattended in case it is requisitioned for housing purposes.

Shortage of Staff.—All that is necessary could be done by local practitioners. As regards nursing, during the war thousands of soldiers were nursed by V.A.D.s in such surroundings; surely the direction of essential personnel still holds good. Besides which there are many local V.A.D. members of the St. John Nursing Division of the Red Cross who would welcome the opportunity of putting their training to practical use. The work of the district nurses would be greatly reduced by centralization of their patients, and some could be released for the more senior supervisory posts. Many young women with wide experience of cooking for numbers have been and are being discharged from the Services and would welcome similar work if suitably paid. There may even be men also discharged from the R.A.M.C. who would consider such work on the male side. Beds, bedding, and all hospital equipment must abound in profusion in Army dumps and depots. Where are the thousands of beds used by the Anti-Aircraft Command alone during the war?

The solution would appear to be as follows: (1) That sufficient beds should be improvised now in preference to waiting for the luxurious accommodation promised by a State medical service. (2) The organization should be decentralized to the local medical officer of health or a committee of local practitioners, who should be empowered to requisition suitable buildings and equipment and authorized to employ and pay the necessary staff. (3) The size of such temporary "hospitals" should be 50 beds, run on the lines of Service camp reception stations during the war. After all, the necessary treatment of these cases would be largely nursing and domestic. Admittedly such conditions would not be ideal or comparable with the provision of luxurious hospitals, but they would be infinitely preferable to what we have got at present, which is nothing. The uncharitable may say that I am merely trying to get rid of difficult and frequently unprofitable patients. This appears to be the impression in many hospitals and public institutions when one tries to get such a patient admitted. Let me forestall this by saying that I shall be only too willing to help in the local organization or medical work required in the running of any such improvised accommodation, on an honorary basis.—I am, etc.,

Harrow. MUNGO PARK.

Cottage Hospitals

SIR,—I have just read in the *Western Daily Press and Bristol Mirror* a report of a meeting of the "Bristol Liberal Discussion Group." At this meeting Dr. R. H. Parry, M.O.H. for Bristol, made some statements about cottage hospitals which in fairness to hospitals and the public should not be allowed to go unchallenged. Dr. Parry is quoted as saying "the cottage hospital is a thing which we ought to see die a natural death" and "more people are killed than cured because they are taken into these places, and first-class attention is not available."

To put it mildly these are very strong words. I imagine that Dr. Parry, who has been M.O.H. for so long, must have had little if any experience of general country practice, or he could hardly have made statements which are an insult to the hospitals concerned and to their medical and nursing staffs, and which in addition are untrue. I have had many years' experience in country practice and had to do with various cottage hospitals, including one in Devon and another in Cornwall. I was on the staff of the former; the other was the nearest available to me, and to this I sent most of my acute surgical cases, and the percentage of recoveries would compare favourably with those of any large hospital. During the past 22 years I have sent in every appendix case I have met, and in all that time there were only one or two deaths. All were operated on by a G.P. who does surgery. The nursing at both hospitals is first class and individual attention is a marked feature—which of course is largely dependent on good matrons. Dr. Parry is possibly unaware that nearly all of these hospitals have a consultant surgeon (or surgeons) at the nearest large hospital upon whom they can call for advice or operation in any major surgical case which they feel they should not cope with. May I also suggest to him that we poor despised G.P.s are not all fools or inexperienced and can usually be trusted to decide what cases should go to the nearest large hospital. At the same time there are patients, especially with acute abdominal conditions, who would die on a long journey and are saved from this by earlier admission to the nearest cottage hospital.

As I have recently retired from practice I can write without prejudice.—I am, etc.,

A. COLERIDGE.

The Disabled Persons Register

SIR,—May I crave a few lines to thank the various correspondents who have helped to lighten my darkness. Thanks to their letters I have discovered the existence of the Disablement

Rehabilitation Officer (who turns out to be our old friend the manager of the local Labour Exchange disguised!) and the Disablement Advisory Committee, who exist somewhere, it is alleged. The D.R.O. has very kindly explained the various procedures and the letter of the law, but why should we have to go to all this trouble to find out details? Surely some explanation should have been given us by circular before we were expected to sign forms and issue the usual stream of gratuitous certificates.

The general interpretation of the Act appears to be that a person is "disabled" if he is unable to perform the heaviest or most skilled work which he has at any time, no matter for what period or how long ago, ever done. I should have thought that the admission to the register of vast numbers of people with very minor degrees of incapacity, such as are the common lot of man, would have made things very cumbersome and eventually defeated the real and most laudable purpose of the Act. However, I suppose "ours not to reason why . . ." but place the onus of all the doubtful cases on the advisory committee and in other words "pass the buck."—I am, etc.,

Pontefract. J. S. LAURIE.

Homosexuality

SIR,—Dr. W. Lumley has written a number of excitable remarks in his letter on homosexuality (March 9) which bear little relation to the facts. He has chosen remarks from Dr. E. A. Bennet's letter out of their context and put a construction on them which the writer clearly did not mean them to have, as any unprejudiced reader could see. Far from being too sympathetic, Dr. Bennet points out how difficult some homosexuals are to treat. He writes: "It would, however, be rash to assume that all homosexuals are to be pitied. Many are untreatable by psychological methods because they disdain treatment or seek it only when faced by unwelcome social implications." Dr. Bennet also says of homosexuals: "To protect a youth from such an experience is very important." What Dr. Lumley quite fails to see is that Dr. Bennet and Dr. Stanley-Jones are concerned with the victims of homosexual practices—they see that the public should be adequately protected, but they are also concerned that something should be done for the homosexual. What treatment is possible should be made available even if it has to be in some cases under prison conditions.

I am writing this letter because in another correspondence in the *Spectator* on this subject I ventured to point out that treatment is sometimes successful, and I had a flood of letters from England, and indeed all over the world, from homosexuals asking where such treatment could be obtained. As a clergyman who has had long psychological training I was impressed by their plight. Also as a clergyman I can find no trace of the "obscene balderdash" to which Dr. Lumley refers in Dr. Bennet's letter.

Dr. Lumley says that he prefers the good old Biblical word "buggers." As I could not recall where it could be found in the Bible I have consulted two concordances, and neither of them gives it. To save me another and longer search perhaps Dr. Lumley will indicate where it is to be found in the Bible.

The whole tone of Dr. Lumley's letter is in itself an unanswerable argument proving that of some members of the medical profession it is accurate to say, as Dr. Bennet did: "It is true to say that the medical profession is largely uninformed about sexual perversions." Fortunately, as he also points out, "ignorance is less widespread in the younger generation."—I am, etc.,

Yetminster, Sherborne. H. L. PHILP.

SIR,—May I be allowed to join in the rather breathless discussion on homosexuality in order to plead that the nation should do something about having more schools for maladjusted children than exist at present. Circular 79 of the Ministry of Education has set the ball rolling, but it is not enough: it does not deal with intelligent pupils. Dr. Clifford Allen's suggestion (March 23, p. 449) is urgent but too centralized for children. There are hundreds of boys passing from the innocent stage of maladjustment—viz., obsessive compulsive sewing, house cleaning, effeminate mannerisms, and so on—who could be easily cured.—I am, etc.,

Kingston-on-Thames. JOHN A. MCCLUSKIE.

Homosexuality and the Law

SIR,—I have read this correspondence with interest and despondency—interest in the variety of views expressed and despondency at so much of the obvious being missed.

When I was a consultant in nervous disorders I saw a good sprinkling of delinquent cases among the usual run of the others, and have appeared in courts of law on rare occasions to help in the defence of offenders. I say *rare* occasions, for it did not take me long to appreciate parts of the legal rulings on such cases (I am not, of course, in agreement with all of them) and to realize how right some judge whose name escapes me for the moment was when he distinguished between an impulse which was irresistible and an *impulse which ought to have been resisted*.

Medical "psychology" has brought, with some new and useful conceptions, a number of ill-digested and half-apprehended "theories" which, in my view, hold such ground as they do hold because of the general ignorance, both in their advocates and in the profession as a whole, of the field of normal psychology—real psychology—and, in the case of some of the more egregious offenders, of the principles of logic and reasoning. The common sense of the Army epitomized this in its own inimitable fashion in the term "trick-cyclist." Most prominent and least excusable among these absurdities is the ancient and chuckle-headed blunder of imagining that to discover the mechanism underlying a wrong action is to excuse it. The modern theories with their "mother-fixations," "aesthesiogenesis," and what not, are more verbose variations of the ancient doctrine of original sin wrapped up in contorted Greek, dislocated Latin, and disorientated English. They are good enough—some of them—so far as they go, but they lack the common sense of those of the ancient doctrinaires who at least realized out of their native wit that even if they "explained" they did not necessarily excuse.

To come to homosexuality: it is a dirty, unaesthetic, and abnormal practice at the best. Even its most enthusiastic apologists will admit that and, for the general credit of the human race if for no better reason, it ought to stay with those things "not done." Like all other modes of behaviour it has many origins and causes, and among these are the following:

1. A man has contracted venereal disease from a woman, gets cured and, deciding not to risk another "dose," goes in for sodomy with little boys.
2. Among the ignorant and those of low-grade intelligence are lustful individuals who fear to "get a girl into trouble" on account of the expense and disgrace attaching thereto and, again, go in for sodomy. Any experienced detective will confirm this, a proportion of the offenders have verified it, and all psychologists (especially medical ones!) ought to know it.
3. There is a low-grade individual who, partly through the laxity of the society in which he lives and partly from the exhaustion which follows long satiety, can find sexual satisfaction only in abnormal practices. He starts as a normal individual, remains one for years, and slowly "learns" or regresses (it is a matter of one's point of view). He is epitomized in the Asiatic saying: "A girl for a boy, a boy for a man, and a goat for sheer delight."

I am afraid that this plain speaking may shock some of your readers, but the subject *has* been opened and the facts must be faced. It is too serious and is coming to constitute too dangerous a threat to civilization to be handled with kid gloves.

One aspect of this trouble frequently overlooked is its occasional occurrence among boys either as the odd case of the bully or as an outbreak in a community of boys. Anyone who has investigated such cases knows their causes and how to deal with them. The isolated case is usually easy to cure, and the outbreak (provided that the necessary administrative help is forthcoming) offers little difficulty to competent psychiatrists. Such people obtain some real insight into immaturity, but this is no place for the discussion of that.

The remainder of the types are really "psychaesthenic," but that is not to say that the great majority of them are not blameworthy. Most of their offences are not "irresistible impulses" but "impulses which ought to have been resisted" (if we must have clichés we might as well have true ones). It is a curious and significant fact that practically none of the people charged with this offence have attempted to get themselves cured until they are caught, and their counsel's tearful accounts of harrowing struggles against an overwhelming fate rightly ring false in

the ears of the wary and experienced judge, who generally weighs up the case very competently. It is a fact also that both those who are convicted and those who "get away with it" are by no means eager to continue treatment and get cured once they are safe.

There remains the balance of genuine sufferers. It is a very, very small but a very pitiful one. These people are genuinely distressed and anxious and most of them are curable. The real psychologist will be able to separate them, and will find his "excusable" group of curiosities very small indeed. In twelve years I saw three genuinely criminally irresponsible homosexuals—two men and one woman.

One very serious aspect of the matter has not been mentioned. I allude to the increased tolerance of jokes of the "pansy" variety. There is, in certain company and on some public stages, a tolerance to a kind of joke and innuendo which a few years ago would have got the offender knocked down in the one case and hissed off the stage and prosecuted in the other. As the level of a society falls so does that of the individual in it, and here is one of the glaringly obvious points which seems beneath the notice of many psychiatric experts.

Finally I must say a word about the victim of the sodomist, although I find it difficult to start. The light dismissal of the effects of the practice upon the victim leaves me turning over some of the cases I have had to handle, in a frame of mind which simply despairs of the psychologists who can so airily dismiss the matter. Of course, there will be a modicum of boys whose natural resiliency and robust mental make-up will carry them successfully through this and more than this, just as there are undoubtedly some individuals among the unfortunate children who went through Belsen whose toughness and courage will carry them successfully through that; but there can be few psychologists of real experience who cannot recall really tragic cases—people who have carried scars which have disfigured all the tableaux of their minds through a lifetime and who, in many cases, have been hard indeed to cure. Some there are who can cite an actual suicide.

It is, of course, impossible to treat this matter anything like fully or really scientifically in a letter, and I am sure, Sir, you would not wish me to try to do so. This is nothing more than a cursory comment on the more obvious and elementary aspects of a matter which, while not being really difficult from the psychological point of view, is yet not altogether an easy one.—I am, etc.,

A. KEFALAS, M.A.(Psychology), M.B.,
Sometime Honorary Senior Physician,
Liverpool Psychotherapeutic Clinic.

SIR,—Most of your correspondents on this subject have shifted to the medical side of the problem, while the first letter was protesting against the infliction of repeated prison sentences on the same individual for committing the same kind of offence.

I have no experience whatsoever in this matter, but from what I have read about the problem I should think it safe to state, without quoting percentages, that some homosexuals can be cured, some can by one prison sentence be prevented from committing homosexual acts in the future, and some cannot in any way be changed. It is the latter fraction, in common with habitual criminals, to which I would like to draw attention.

A doctor, when treating a patient and administering a medicine, may find that the condition of his patient does not improve. He may then double the dose, but when finding that this also does not help, will surely look for another remedy and refrain from doubling the dose *ad infinitum*. This, however, is precisely what the law does. It strikes me as illogical that the "incurable" homosexuals and criminals should be repeatedly condemned to prison, while after each sentence they are allowed to mix freely with the population and be at liberty to commit the same acts of which the community strongly disapproves. It seems to me that this procedure is as unwise as it is ineffective. Strict supervision and segregation would probably prove a better way of solving this problem.—I am, etc.,

Redruth. R. SALM.

Castration for Homosexuality

SIR,—Drs. Stungo and Chesser (March 23, p. 450) say that it is unfortunate that castration should have been recommended as a cure in the worst cases of homosexuality. The remedy, they affirm, is at present disregarded, not because medicine and the law are ignorant of the results, but because "such treatment would be most likely to accentuate passive tendencies which are innate in homosexuals." I do not know what their words mean; they exemplify the conjectural science and hazy argument on which some people appear to think medicine ought to depend. If your correspondents can describe one instance in which castration for the cure of homosexuality in the male has been found unsatisfactory I should be grateful to receive the details.—I am, etc.,

Marlborough. HAROLD BURROWS.

Medical Future of the Colonies

SIR,—"A Colonial" (Jan. 26, p. 147) craves sympathy for his African colleagues on account of the inequality of salaries between European and African officers in the Colonial Medical Service. As everyone knows out here (I speak from eighteen years' experience in the Colonial Medical Service), the difference in salary grades is made to compensate the married European officer who has, of necessity, to maintain two homes for the sake of his children during their childhood and adolescence. There is no doubt that, taking into consideration general living conditions and the cost of education in Great Britain, the European with wife and, say, two children has at least double the expenses of his African colleague with the same family commitments and one home to keep. The African may elect, of course, to send his children to Europe for education, but that would be from choice, not necessity, as in the case of the European.

Though it is true to say that the European officer attains the salary of £1,200 in sixteen years, in this colony at any rate the African reaches £720 in twelve years. As these salaries are the maxima of their respective grades I cannot see, in the light of the facts I have given, that there is any inequality at all. In fact the advantage is with the African, and the lack of European recruits to the service is due, in no small measure probably, to the meagre salary prospects offered to the latter.—I am, etc.,

Nigeria. "EUROPEAN M.O."

Work of Physiotherapists

SIR,—The "voice crying in the wilderness" of Dr. W. S. C. Copeman (March 2, p. 335) and your editorial on the same subject make good reading for someone who, like myself, for more than 20 years in Czechoslovakia and subsequently for over 6 years in this country had ample opportunity day by day to see what a vital part the physiotherapist plays—*ceteris paribus*—in the treatment of rheumatic disease.

Having found that the latter is one of the most frequent causes of absenteeism through disease of the miners, the management of a group of Midland collieries has entrusted me to improve conditions in this respect. For that purpose I have organized several physical treatment centres, reducing the absenteeism in question by 18 to 20% yearly. This result, which has such a far-reaching importance from both the human and the national-economical points of view, would never have been achieved without the magnificent help of the physiotherapists working in the clinics. Each of them has given year by year anything between 4,000 and 7,000 massage and electrical treatments. This wonderful effort represents high professional skill and great devotion to duty, a parallel to which is difficult to find, especially if we take into consideration that all this has been done for a non-residential salary less than £300 a year (from which tax has to be deducted). It is really high time that something should be done about improving their lot, and I hope that your and Dr. Copeman's voices will be heard by those in whose hands lies the future of this so essential auxiliary service.—I am, etc.,

Oliphant Hall, Newark. L. SCHMIDT.

The Ministry of Health announces that arrangements have now been made whereby all civilians repatriated to the United Kingdom from enemy-occupied territories will be entitled to free medical, including optical and dental, treatment as follows: (*a*) for a period of six months from the date of landing, in respect of *any* disability; (*b*) after the end of six months, in respect *only* of illnesses or disabilities accepted by the Ministry of Pensions as attributable to war operations over-seas or to the effects of internment.

Obituary

A. MAITLAND RAMSAY, M.D., LL.D.
F.R.S.ED., F.R.F.P.S.GLAS.

Dr. Andrew Maitland Ramsay, the eminent Scottish ophthalmic surgeon, died at St. Andrews on March 20 aged 86. His many appointments included those of consulting ophthalmic surgeon to the Glasgow Royal Infirmary and to the Glasgow Eye Infirmary. He had been president of the Ophthalmological Society of the United Kingdom for two years and of the Section of Ophthalmology at the Annual Meeting of the British Medical Association held at Bradford in 1924.

Born in Glasgow in 1859, son of Andrew Ramsay, he was educated at Linlithgow Grammar School and at the University of Glasgow, where he graduated M.B., C.M. with commendation in 1882, and M.D. in 1891. He became a Fellow of the Royal Faculty of Physicians and Surgeons of Glasgow in 1892 and a Fellow of the Royal Society of Edinburgh in 1923, in which year his own university conferred on him the degree of LL.D. On qualifying he served as house-surgeon at the Glasgow Western Infirmary (where he was afterwards ophthalmic surgeon) and as demonstrator of anatomy in the university. During the war of 1914–18 he held a commission as major, R.A.M.C.T.F., on the staff of No. 3 Scottish General Hospital; later he was medical referee for eye cases under the Workmen's Compensation Act for Lanarkshire, and Renfrew and Bute, Stirling, Clackmannan, Dunbarton, and the County of Ayr. He was a past president of the Royal Medico-Chirurgical Society of Glasgow, and had been vice-president of the Ophthalmological Section of the Royal Society of Medicine.

Maitland Ramsay attended the Annual Meeting of the American Medical Association in 1904 as a guest of honour and gave an address on a subject to which he had long paid attention and often recurred—the importance of general therapeutics in the treatment of ocular diseases. His *Atlas of External Diseases of the Eye* appeared in 1898; this was followed by other books at intervals, on *Eye Injuries and their Treatment* (1907), *Diathesis and Ocular Diseases* (1909), *Clinical Ophthalmology for the General Practitioner* (1920), and *The Eye in General Medicine* (1929). In the last-named book the author expounded his thoughts about the eye and its diseases and the application of those thoughts to various practical situations. With the wide view habitual to him he urged every practitioner to cultivate the ophthalmoscope as a routine method of examination, and pleaded that ocular disturbances and diseases should always be considered in relation to the body as a whole. During more recent years Maitland Ramsay, whose mind kept its vigour and clarity into old age, contributed four papers to the *British Medical Journal*, including one on "Disease at its Onset: With Special Reference to Ocular Manifestations"; another on "Clinical Science and Ophthalmology"; and the last, published less than three years ago, under the title "The Ophthalmoscope in Clinical Medicine: The Interior of the Living Eye considered as a Biochemical Laboratory."

He married in 1907 Dr. Elizabeth Margaret Pace; he had joined the B.M.A. as long ago as 1888, and she in 1893. He was a keen golfer—a member of the Royal and Ancient Golf Club—and it was at the Castle House, St. Andrews, that they made their home for the last seventeen years of his life.

Prof. W. B. J. RIDDELL sends the following appreciation:

Dr. Maitland Ramsay was born in 1859 within the decade which followed the discovery of the ophthalmoscope. He devoted his active life to the clinical aspects of eye disease and was never tired of stressing the debt which medicine owed to ophthalmology. He was an enthusiastic student and teacher all his life, and was both patient and forbearing with doctrines for which he had little real sympathy. He dreaded the regimentation and restriction which he considered were looming ahead for the clinical worker and he was genuinely anxious about the future. I received many letters on this theme along with much mellow wisdom regarding the importance of maintaining the clinical aspect of disease in the forefront of our minds.

He was a delightful companion and host in St. Andrews, where he retired over twenty years ago. His name is well known to generations of Glasgow students, who attended his classes, and his books, designed for the busy physician, have always been valued. His deep love for individual liberty, and his insistence upon absolute freedom to practise the art of medicine unfettered by committees or administrators, are lessons which we may well bear in mind to-day. When we are on the eve of great changes in medical practice the lives and writings of men like Maitland Ramsay have a new significance and may be studied with great profit.

SIR JAMES BERRY

Prof. GREY TURNER writes:

I would like to add a few personal reminiscences to your admirable obituary notice of my dear old friend James Berry, whose help and kindness to young surgeons in the generation to which he belonged were proverbial. Berry had a great name in surgery and will always be remembered as an influence for good in whatever he undertook.

Fifty years ago what I might call the Berry tradition for devotion to duty, painstaking care in hospital work, and absolute accuracy in observation and recording reached Newcastle-upon-Tyne, for some of my immediate seniors had come under his sway during his notable surgical registrarship at St. Bartholomew's Hospital and they brought enthusiastic reports about him. That was undoubtedly a great period at Bart's, for his seniors were nearly all men of distinction who had been directly influenced by Paget, and Berry worthily upheld the high standard which they set. It was during the South African War that I first saw him at work in the old operating theatre where he was deputizing for Anthony Bowlby, then serving with the Forces in Africa. It was a breast case, and to this day I remember his scrupulous care and his anxiety to keep the wound covered and protected. It was a lesson which made a deep impression at twenty-two years of age and has been useful to me through all the intervening years. His book on *Diseases of the Thyroid Gland* published 45 years ago was largely devoted to the surgical aspects of that subject and was a model of its kind; after it appeared Berry was recognized as one of the pioneers in thyroid surgery. Like so many books by young surgical authors, it was based on the essay which brought him the Jacksonian Prize for 1886 at the College of Surgeons. But the essay had been much expanded and he had taken endless pains to widen his knowledge by visits to other hospitals not only in London and the Provinces but on the Continent. Several of the illustrations were from photographs taken by him on some such tour and revealed his early habit of visiting clinics abroad, which continued throughout the whole of his active years in surgery. His example in this respect did a great deal of good and acted as a stimulus to many young surgeons.

In those early days he first paid a visit to Newcastle to watch the work of Rutherford Morison, whom he greatly admired, and to visit one of his old Bart's pupils, W. G. Richardson. At that time I was acting as assistant curator to the pathological museum at the Medical School, and I shall never forget an early morning visit when Berry came round with me and not only admired some of the preparations but encouraged me in every possible way and suggested lines of surgical research. Thereafter he made several visits to Newcastle and his active enthusiasm and kindness were a great stimulus. One of his most striking characteristics was the way he combined his love of surgery with his affection for archaeology. This trait was very noticeable in London, for even in his very busy years he was always prepared to spare an hour to visit some object of archaeological interest or to take friends to one of the museums which he knew intimately.

During his very active work just after the 1914–18 war he gathered about him young people as assistants and visitors in his private practice, and many of his helpers of those days are now well-known surgeons and all look back with gratitude to their association with such a master. The care with which Berry pointed out practical points and the trouble he took to try and help, and his rare sharp but kindly rebukes, are warmly recalled because behind it all was his ardent desire to be helpful to those who were treading the same path which in his early days he had followed, sometimes rather painfully. Having been house-surgeon to Sir Thomas Smith, that great exponent of cleft-palate surgery, it is not surprising that he took an intense interest in the subject. Berry himself had been a victim, and it was a lifelong effort which enabled him to overcome any remaining disability in speech and a great exhibition of determination that he could deliver lectures and make speeches which were always appreciated and enjoyed by his audiences. Furthermore he was a capable linguist in several tongues. It was in his cleft-palate work that his love of precision and accuracy came out at its best. The book on *Harelip and Cleft Palate* which he produced jointly with his old pupil T. P. Legg was a splendid monograph and by far the best which had been published. Judged by the standard of the achievements of those days in this line of work his results were surprisingly good. Berry preserved an open mind

and was always looking for some method which would enable him to do still better for his patients. In spite of his great reputation in thyroid work and his notable contributions to cleft-palate surgery he was always a general surgeon, and it rather annoyed him that anybody should regard him only as a specialist in those subjects. His papers on intestinal injuries and bone tumours were both real contributions to the subjects, and there were many others. His work was based on a thorough foundation of anatomy, pathology, and clinical experience, and he insisted on the extreme value of post-mortem examinations for the education of the surgeon. His interests and his reading were wide: he was always surrounded with books, none of which were trivial and many profound. He had a great gift for friendship and for hospitality.

Surg. Capt. LAMBERT ROGERS writes:

Sir James Berry's death takes from us a pioneer of thyroid surgery in this country. At a time when physicians were opposing the surgical treatment of Graves's disease Sir James was operating on patients suffering from it. This was long before iodine given before operation had reduced the risk of surgical treatment, and when the only means of doing so was by performing stage operations such as preliminary ligation of the thyroid arteries. In association with his old friend, the late Dr. Strickland Goodall, who saw cases with him, it would be decided whether a ligation was advisable, a resection in stages, or whether a primary subtotal operation could be performed. Berry and Strickland Goodall were preaching that subtotal thyroidectomy was the wisest treatment of Graves's disease long before such treatment came to be generally recognized and often in the face of much opposition. Sir James's interest in the thyroid went back to 1886. Following Theodor Kocher's work in Berne, Berry's in this country, along with that of Sir Thomas Dunhill in Australia and the Mayo Brothers in America, may truly be said to have established thyroid surgery in the English-speaking world. Apart from his work on the thyroid, however, Sir James was a sound general surgeon whose work was outstanding. He was external examiner in surgery in the University of Wales and students found him kind and painstaking. He was beloved by his colleagues, every one of whom knew that his records, statistics, and claims were invariably and scrupulously honest. Apart also from his pioneer work on the thyroid he was a link with the past in another way, as he was one of the few living surgeons who had known Sir James Paget in his heyday.

I had the great privilege of being taught thyroid surgery by him. In those days, before preoperative iodine, the surgery of Graves's disease, cases of which were often very severe and only referred because they refused to yield to medical treatment, was often a desperate business and called for a great nicety of judgment and technique. Sir James used to say that no one should operate on such cases until he had done a hundred adenomas. His great spirit, careful and sound work, and scrupulous intellectual honesty and integrity have been an inspiration to many, who, like myself, will be thankful for the privilege of having known him.

Dr. LINA M. POTTER writes:

The very excellent obituary notice of Sir James Berry (March 30) deals with him entirely as a surgeon, but there must be many, particularly among old Royal Free students, who look back upon him as a very inspiring teacher. He took great pains to teach and incidentally expected great pains from his students in return. I well remember being invited as a student to assist him at a private operation and receiving the then not inconsiderable fee of 10s. 6d. One's first experience of doing the real thing and getting real money for it is not easily forgotten.

The sudden collapse and death of CHARLES WALTER DURWARD on Feb. 19, while on a visit to Brierley Hill, Staffordshire, came as a shock to his many friends in and out of the profession. He was born 50 years ago in a Scottish manse and graduated M.B., Ch.B. at Edinburgh in 1923. After serving as a house-surgeon at the Royal Infirmary he came south to a resident appointment at the Royal National Orthopaedic Hospital and eventually became senior house-surgeon, proceeding later to Stanmore as assistant medical superintendent just when the country hospital began developing at Brockley Hill. In those early days at Stanmore he combined with his clinical duties the work of radiographer and anaesthetist, and he watched the growth of the hospital with lively interest. The establishment of a college for the training of crippled youths in suitable crafts made a strong appeal to him, and he did valuable work in sympathetically helping the newcomer to discover the most genial occupation for which his physical disability would allow him to train. At the outbreak of war Stanmore became an E.M.S. hospital and the Ministry of Health added 400 beds to the existing accommodation, whereupon Durward became administrative officer, the duties of which he carried out with great efficiency. The evolution of Stanmore as a country orthopaedic hospital owes a great deal to him for his help and particularly in its early stages, for he started there when it was but a house and a garden, and remained to see it creep along until it possessed the whole crest of the hill. But outside the hospital he was more widely known for his activities with the Scout movement. Since his boyhood days he had kept up a continuous interest in its organization, and he came to occupy a prominent place in the movement. He was for nearly 25 years district commissioner for the Edgware district, headquarters commissioner for handicapped scouts, a deputy camp chief in the training of scoutmasters and cubmasters, for some years was editor of a scout periodical, and served on many conferences. Through these appointments and by his scout name "Kim" he became known in all countries, and he was ever ready to help and father foreign scouts on visit to England. In this way he had friends all over the world and kept up a correspondence with them. Under his guidance the movement grew in the Edgware district from two groups of about 100 boys to 23 groups of about 1,600 strong. He even formed the first and second Brockley Hill Groups composed entirely of hospital patients, and this venture undoubtedly added to the happiness of many physically afflicted boys. In the words of a colleague "he was a very fine example of what a scout should be and lived up to the Scout Law and Promise, and no words can really testify to his good deeds which he did so quietly and without fuss." The crowded memorial service at St. John's, Stanmore, in spite of a bleak and inclement afternoon, was a testimony to the respect and affection in which he was held.—A. R.-J.

Dr. JAMES GRAHAM MCBRIDE, who died at York on March 6, had been principal medical officer for the North-Eastern and Scottish areas of the L.N.E. Railway Company, and was consultant to the company until he retired in 1939. Born in Edinburgh on July 24, 1879, son of the well-known oto-laryngologist Dr. Peter McBride, he went to school at Edinburgh Academy and Clifton College, and entered the University of Edinburgh as a medical student, graduating M.B., Ch.B. in 1901. After house appointments at the Edinburgh Royal Infirmary, including that of H.S. in the eye department, he obtained the F.R.C.S.Ed. diploma and held office as honorary secretary, and later president, of the Royal Medical Society of Edinburgh; he had also been resident physician at the City Hospital for Infectious Diseases. He spent a year at clinics in Freiburg, Berlin, and Paris, and on his return in 1905 joined the former North-Eastern Railway as medical inspector at York. In 1924 he was appointed medical officer for the North-Eastern and Scottish areas of the L.N.E.R. Dr. McBride joined the B.M.A. in 1906 and had been president of the York Medical Society.

After a sudden and short illness Dr. ARTHUR EDMUND CARVER died at Torquay on March 17, two weeks before he had intended to retire. He studied medicine at Cambridge and St. George's Hospital, graduating M.B., B.Ch. in 1901, and taking M.R.C.P. in 1902. He proceeded M.D. in 1904, after holding a number of house appointments and acting as medical registrar at the Westminster Hospital. Dr. Carver was consulting physician to the Brixham Hospital and the Torbay Hospital, and during the war of 1914–18 served with the R.A.M.C. in Salonika. A colleague writes: His passing will be felt as a great loss by a wide circle of patients and colleagues who knew him as a shining example of all that was best in his profession, and no less by those who had the good fortune of his personal friendship. His patients will remember him for many reasons, but above all for that quality of the true physician, the ability to deal with the patient as a human being rather than with the patient's disease as a scientific problem. They will remember his generosity, discretion, and tact, and in Stevenson's words "what are more important, Heraclean cheerfulness and courage." His colleagues, too, owe him much. Though he was a most unassuming man, he had for many years taken an active and influential part in many of the medico-political and social activities of his profession. He was an active supporter of the B.M.A. and was an ex-president of its S.W. Branch. His last and probably most important contribution to the welfare of his colleagues was his work as chairman of the Torquay Division Local Medical War Committee. This post he held for the first five years of the war, and in it he did a vast amount of exacting and exhausting work, which he carried out with enthusiasm and without ever counting the cost. It was in such work that he showed to the full his outstanding qualities of sound common sense and the wisdom which made him such a valuable counsellor to us all. To his friends he was a friend indeed—one to whom one could turn equally in foul weather or in fair, a friend with whom one could always share a sorrow—or a pleasure. Each generation in its turn must pass away, leaving behind them memories which serve us and help us afterwards. Dr. Carver will be long remembered. His example and his teaching will be a help and a support to many for years to come.

Medical Notes in Parliament

Health Service Bill

SECOND READING AND AMENDMENT

Sir WAVELL WAKEFIELD asked on March 21 when the second reading of the National Health Service Bill would be taken. Would it be before Easter? Mr. HERBERT MORRISON replied that the Government wished to take it before Easter, but naturally wished to give members time to consider the proposals in it. Sir WAVELL asserted that to take the second reading of the Bill before Easter would not give reasonable time for consideration and discussion. Mr. MORRISON said it was highly probable that there would be nearly three weeks. He thought that ample. Mr. EDEN remarked that many members would wish to take local opinion on this Bill. Surely it would not be unreasonable that the Bill should be an early item after the Easter Recess.

On March 28 Mr. EDEN inquired whether Mr. Morrison could give more information about the second reading. He said the Bill was of great concern to local authorities. It seemed desirable that members should have the opportunity of consulting constituents and local authorities before being asked to debate it. Mr. MORRISON still thought it would not be unreasonable to take the second reading before the Easter Recess. To that position he must adhere. On the other hand he was willing that there should be conversations (with the Opposition) through "the usual channels." If some over-all understanding could be reached there might be elasticity with a view to meeting the point Mr. Eden had raised. He was willing to take into account the desire of members to consult constituents and local authorities.

On March 28 Sir HENRY MORRIS-JONES and ten other members of the Liberal National Party tabled an amendment to the motion for the second reading of the National Health Service Bill. This runs:

> "That this House, whilst welcoming a comprehensive scheme of health service for the nation, is unable to agree to a measure containing such far-reaching proposals involving the entire population without any consultations having taken place between the Minister and the organizations and bodies representing those who will be responsible for carrying out its provisions; and is of opinion that as the measure cannot come into effect without the co-operation of the medical and allied professions, it is necessary that the terms of service offered to them by the State should be incorporated in the Bill."

Mr. GAITSKELL inquired on the same day whether the salary and capitation fees to be paid to doctors taking part in the service would be affected by the number of private patients, if any, whom they treated. Mr. BEVAN replied that if the Bill now before the House passed into law these would be matters for discussion when subsequent regulations were being drawn. He could not attempt to anticipate them now.

Later Mr. Bevan told the House that there never was any question of giving advance details of the Bill to the British Medical Association as such or to any other similar body before the Bill was presented to Parliament. In preparing the health service proposals he consulted various groups of professional people who were qualified to advise him on the issues involved. These included herbalists.

"Redundant" Hospital Staffs

Mr. LESLIE on March 21 asked Mr. Bevan whether he would consider transferring redundant supernumerary medical men from hospitals to relieve doctors in private practice who were unable to obtain assistants to cope with numerous panel patients, particularly in mining areas. Mr. BEVAN did not agree that there was redundancy in the medical staffing of hospitals. These were required to observe an establishment approved by the Central Medical War Committee. Any doctors redundant to that establishment were normally free to transfer to general practice. Mr. Bevan added that he had no powers of direction such as Mr. Leslie suggested, but he hoped that under the National Health Service Bill the Government would have powers which would provide greater opportunities for redistribution.

Medical Call-up

On March 21 Mr. LESLIE asked how medical committees were selected to deal with the calling-up of doctors to the Services, and what action they took to provide substitutes to fill the places of doctors called up, especially in cases where numerous panel patients had to be catered for. Mr. BEVAN said the committees to which Mr. Leslie referred were the Central and Local Medical War Committees. A description of their method of selection would require a lengthy statement. No system of call-up could be based upon an obligation to find substitutes for all persons called up under it, and it was not the duty of the committees to do so. It was their function, however, to endeavour to arrange their recommendations for call-up in such a way as to cause the least practicable interference with urgent civil requirements.

Grants for Medical Education

Mr. DALTON stated on March 21 that the grant-in-aid of universities provided, both last year and this year, £1,000,000 for additional annual grants for medical education, and £500,000 for additional annual grants to teaching hospitals. This year's increased grant also included £2,500,000 for capital grants to universities, including medical schools.

Research into Pneumoconiosis

Mr. SHINWELL, in an answer to Dr. Barnett Stross on March 21, said investigations were being made in association with the Ministry of Fuel by the Pneumoconiosis Research Unit of the Medical Research Council. The Working Party, under the chairmanship of Mr. D. R. Grenfell, had said in a recent report that there was abundant evidence of marked physical and mental improvement among partly disabled persons when found suitable work. The Research Unit in South Wales was studying medical aspects of the problem. This investigation would be developed as arrangements for providing alternative work expanded. The possibilities of direct treatment of the disease were also to be investigated. A special clinic for this purpose, in association with the hospital at Llandough, would soon be in operation. Similar investigations were to be made among tin miners in Cornwall. Another matter for study was treatment by inhalation of finely powdered aluminium.

Replying on the same date to Mr. G. Thomas, Mr. JAMES GRIFFITHS ruled that under the provisions of the Industrial Injuries Bill a workman who before the start of the new scheme had been certified to be disabled from pneumoconiosis or silicosis would not be eligible for the benefits of the new scheme in respect of the disability, except in certain circumstances for an "unemployability" allowance or a "constant attendance" allowance.

Detention Barracks Inquiry

Mr. LAWSON stated on March 26 that he had received the report of the court of inquiry into conditions at Stakehill military detention barracks. Its general conclusion was that allegations which had been made were either unfounded or grossly exaggerated. It was untrue that one prisoner who committed suicide had been "beaten up" before he died. Criticism was deserved because the attention of the medical officer had not been specifically directed to this case, where there had previously been talk of suicide and an alleged attempt. In a second case a soldier died from sudden and unpredictable heart failure while practising running in physical training dress. No blame for his death could be attributed to any Army authority. Mr. Lawson was satisfied that the charge that the death certificate had been given without a post-mortem examination was not substantiated. In Stakehill medical arrangements were well up to standard.

Spens Committee

On March 28 Colonel STODDART-SCOTT inquired when the Spens Committee would report upon doctors' and specialists' remuneration, and when the committee inquiring into dentists' remuneration would issue its report. Mr. BEVAN said he hoped to have the Spens Committee's report very soon. The committee was not concerned with specialists. An analogous committee for dentists was proposed but had not yet been constituted.

Fats and Flour

On March 28 Mr. HERBERT MORRISON announced that a debate on the world food shortage had been arranged for April 4.

Answering Mr. EDEN on March 25, Sir BEN SMITH said the position concerning oils and fats was serious. No decision had been reached on the measures necessary to deal with it. He was consulting his colleagues and would make a statement as soon as possible. A White Paper on the general food situation would be published soon. The following day the Minister said a regrettable error had been made in reports from the Ministry of Food concerning impending reductions in rationed foods.

The House of Commons on March 27 approved the Flour Order of March 5, 1946, increasing wheat extraction. During the discussion DR. SUMMERSKILL reported that the Ministry of Food could not say whether it intended to adulterate bread further with oats, barley, and rye. Whether calcium would again be added to the bread would depend on the advice of the Ministry's scientific advisers. As a doctor she said the extraction rate of 85% had an excellent influence on the nutritional value of the loaf. Other countries were raising the extraction rate. Many had a rate of 90%, and some of 100%. In the United States the extraction rate was going up from about 75% to 82½%.

Notes in Brief

Of 101 county and county borough mental hospitals in England and Wales, eight were wholly or mainly diverted to other uses during the war. Of the eight, one has been completely released, and parts of two others.

Mr. Attlee will not consider appointing a Minister of Sport and Physical Culture.

Returns from the local authority show that the number of cases of diphtheria notified in Darlington in 1944 among immunized children was 30, compared with 122 among children who were not immunized. Of the 10 deaths from diphtheria assigned to Darlington in 1944, 8 were of persons under 15 and 2 of persons over 15; they included no immunized child.

During 1945 the Ministry of Labour placed 2,480 women and 381 men in mental nursing or mental deficiency nursing. In addition employers engaged just over 1,000 nurses by direct contact, making a total of nearly 4,000 persons engaged for mental nursing and mental deficiency nursing during the year. The Ministry's local officers filled nearly 50,000 domestic vacancies in hospitals of all types in the same year.

Universities and Colleges

UNIVERSITY OF LONDON

Sir Francis Fraser, M.D., F.R.C.P., has been appointed director of the British Postgraduate Medical Federation, which is being set up to co-ordinate and develop the facilities for postgraduate medical education in London.

Alexander Haddow, M.D., D.Sc., has been appointed to the University Chair of Experimental Pathology tenable at the Royal Cancer Hospital (Free) as from Oct. 1. Since 1940 he has been on the staff of the Chester Beatty Research Institute of the Royal Cancer Hospital.

Alan Carruth Stevenson, M.B., Ch.B., D.P.H., has been appointed to the University Readership in Public Health tenable at the London School of Hygiene and Tropical Medicine. Since 1937 he has been deputy medical officer of health at Wakefield and during the war was on active service with the R.A.M.C.

The title of Reader in Pharmacology in the University has been conferred on H. O. Schild, M.D., in respect of the post now held by him at University College.

UNIVERSITY OF LIVERPOOL

The following candidates have been approved at the examinations indicated:

FINAL M.B., CH.B.—*Part II:* F. G. Anderson, Olive M. Bell, A. J. Borkin, J. H. Brenner, Mary E. Casper, [1]Beryl G. Castell, J. B. Cowie, I. S. J. Crosbie, J. C. Davis, E. Dewsbury, Nancy V. Dilling, W. M. Edwards, W. Ellenbogen, [1 2]Jeanne A. Elphick, H. C. Endbinder, D. W. A. Evans, A. J. Farmer, I. L. Francis, [1]Sheila K. Frazer, H. J. Gilbride, T. H. H. Green, G. I. T. Griffiths, Elizabeth Howorth, Joan M. Hughes, D. H. Hyde, E. Jones, Meira Jones, S. Kalinsky, [2]F. D. Kitchin, F. P. Lennon, G. L. Levy, Edith G. Mercer, Alicia J. Middle, J. Moloney, Thelma M. Morgan, Dorothy M. Morris-Jones, [1 2]Janet H. Mountford, J. M. Old, W. L. Owen, Dorothy C. Peterson, J. S. Porterfield, J. K. M. Rawlinson, Elizabeth Rhind, [2]J. E. Riding, F. L. Sharples, Audrey A. Shone, G. C. Slee, W. B. Smellie, R. J. Smith, Basha Taylor, B. Towers, M. H. Turner, Pamela J. Tyson, D. G. Walker, Barbara Webber, D. J. West, H. H. Whincup, D. P. C. Williams, L. C. Wolfman, Jessie I. Young. *Passed in Separate Subjects:* G. Frew, G. H. Lucas, W. P. Wilson (Public Health); H. Keidanh, W. A. L. Thompson (Forensic Medicine and Toxicology).

[1] Distinction in public health. [2] Distinction in forensic medicine and toxicology.

UNIVERSITY OF MANCHESTER

The following candidates have been approved at the examination indicated:

THIRD M.B., CH.B.—*Pharmacology:* F. J. Davies, D. D. Hilton, Aelwen Hughes, H. Jackson, G. P. Love, V. T. Mason, J. G. Mathie, Mrs. Barbara Oldham, R. Ormerod, K. Robinson, Margaret E. Thorp, R. J. A. Webb, Doreen Wilkinson.

UNIVERSITY OF SHEFFIELD

The following candidates have been approved at the examinations indicated:

M.D.—H. Cullumbine.
M.B., CH.B.—D. E. Hobday, S. M. Patel, Pamela M. Smith.

Medical News

A meeting of the Middlesex County Medical Society will be held at Hillingdon County Hospital on Saturday, April 13, at 3 p.m.

A meeting of the London Association of the Medical Women's Federation will be held at B.M.A. House (Tavistock Square, W.C.) on Friday, May 3, when Dr. V. Mary Crosse will speak on "The Care of the Premature Baby."

The Association of Port Health Authorities of the British Isles has decided to revert to the peacetime practice of holding its annual meeting over a period of three days, and this year the meeting will take place at Edinburgh on May 28, 29, and 30. The hon. secretary of the Association is Dr. H. C. Maurice Williams, Civic Centre, Southampton.

The meeting of the Institute of Almoners which Sir Ernest Rock Carling addressed on March 15 was the first annual meeting of the new body incorporating the Institute of Hospital Almoners and the Hospital Almoners Association. The function of the new Institute is to take over and extend the activities of these two bodies, to select and train suitable candidates for almoners' posts, to grant certificates to qualified almoners and keep a register, and to improve the standard of technical and professional knowledge. Sir Alfred B. Howitt has become president in succession to Sir Farquhar Buzzard, and it was announced at the meeting that Prof. Alan Moncrieff had consented to become chairman. Over 200 appointments to almoners' posts were made last year.

Mr. James Phillips, consulting surgeon to the Bradford Royal Infirmary, was entertained on March 21 to a complimentary dinner by the Spenborough Urban District Council to mark nearly thirty years of devoted service to the cripples and those in need of orthopaedic treatment in Spenborough, at the Ellison Clinic, Cleckheaton. Sir Bernard Sugden, who took the chair, handed an inkstand to Mr. Phillips.

The Council of the National Association for the Prevention of Tuberculosis at its March meeting passed a resolution very strongly urging the maintenance of treatment allowances for tuberculous patients, with special reference to the new National Insurance Scheme.

On April 2 Walton House, the British Legion's home for paraplegics (spinal injury cases), was opened at Aylesbury. The object is to restore to as normal a life as possible ex-Servicemen paralysed from the waist downwards. It is the Legion's aim to let these men, with their wives and children, stay at Walton House for a month in order that the whole family can adjust themselves to the new conditions. Wives will be given expert tuition in the care of their disabled husbands, and during their stay they will run the place as if it were their own home. It can accommodate two families at a time. Bed-sitting rooms, bathroom, and kitchens are on the ground floor. Doors are wide enough to allow wheel-chairs to pass freely through, and there are ramps to let the disabled man have smooth passage to the street.

Our advertisement pages this week contain announcements by the Church Missionary Society inviting applications for posts as assistant physician to the C.M.S.

The War Office announces the following release programme for medical officers in the Army: April 1 to 30.—General duty medical officers, Groups 41 and 42, and specialists and graded specialists, Groups 29 and 30. May 1 to 31.—General duty medical officers, Groups 43 and 44, and specialists and graded specialists, Group 31. June 1 to 30.—General duty medical officers, Groups 45 to 47 inclusive, and specialists and graded specialists, Groups 32 and 33.

The Central Council for Health Education, which is holding a residential summer school at Somerville College, Oxford, during August, 1946, regrets that as all places for this school are already filled no further bookings can be taken.

The following statement has been issued in Belfast by the Ministry of Health and Local Government for Northern Ireland: "The National Health Service Bill presented to the United Kingdom Parliament by Mr. Bevan does not relate to Northern Ireland. The Northern Ireland Government is not yet in a position to announce its policy with regard to the future hospitals and other medical services. No announcement on this will be made until after the Minister of Health and Local Government (Mr. William Grant) has had consultations with the appropriate bodies."

Tuberculosis Index and Abstracts of Current Literature is a new quarterly journal published by the National Association for the Prevention of Tuberculosis (Tavistock House North, Tavistock Square, W.C.1) for the Tuberculosis Educational Institute. It will provide a complete list of articles on tuberculosis in world scientific and medical literature, and also abstracts of the more important contributions. The entries and abstracts will be current. Each number of the index will review articles published in the preceding three-

monthly period. The index will be managed by the following editorial board: Frederick Heaf (chairman), J. G. Scadding, W. H. Tytler, W. E. Snell, W. E. R. Saunders, Harley Williams (editors), W. R. Bett (medical librarian), with the assistance of R. Scott Stevenson (laryngology), Frank Airey (dermatology), S. Alan Malkin (orthopaedics), J. H. Carver (genito-urinary). First issue April, 1946.

EPIDEMIOLOGICAL NOTES

Discussion of Table

In *England and Wales* the notifications of measles fell by 67; an increase in prevalence was recorded for whooping-cough 163, acute pneumonia 157, and dysentery 80.

The whooping-cough increase was confined to a few counties, the largest rises being Essex 63, Yorkshire West Riding 53, and London 40. The largest variations in the local returns for measles were decreases in London 127, Lancashire 36, and increases in Essex 47, Suffolk 45. The largest increases in diphtheria were Yorkshire West Riding 17, Gloucestershire 15; Hertfordshire 17 and Surrey 15 were the largest falls. One further case of paratyphoid was notified from Newport M.B., Isle of Wight, making a total of 34 in the last three weeks. A slight rise in pneumonia was reported from most areas, notably Middlesex 36.

Three new outbreaks of dysentery were reported during the week: Sussex, Chantonbury R.D. 20; Westmorland, The Lakes U.D. 11; Lancashire, Chorley M.B. 47, which was mainly responsible for the increase in Lancashire from 50 to 103. The other large returns were London 40, Leicestershire 36, Warwickshire 16, Gloucestershire 15, Essex 12, Cambridge 10.

In *Scotland* the outstanding feature of the returns was the drop in diphtheria from 116 to 55. No case of diphtheria was reported from Glasgow, where in the three preceding weeks 45, 35, and 44 cases were notified. The only other large change in incidence was an increase of 59 in acute primary pneumonia.

In *Eire* diphtheria and scarlet fever were more prevalent, the rises being 10 and 20.

Quarterly Returns for Scotland

During the fourth quarter of 1945 the birth rate was equivalent to 16.5 per 1,000 and was 0.5 below the average for the preceding five December quarters. Infant mortality was 57 per 1,000 live births and was much the lowest rate recorded for a fourth quarter, being 14 below the five-years average. The general death rate was 12.9 per 1,000 and was 0.8 below the average. The marriage rate was 10.0 per 1,000 and, with the exception of 1939 and 1940, was the highest rate recorded for a fourth quarter.

A preliminary survey for the whole year shows that the birth rate during 1945, 16.9 per 1,000, was the lowest ever recorded in Scotland. The infant mortality was 56 per 1,000 live births, much lower than any previous Scottish infant mortality rate; the previous lowest rate was 65 in 1943 and again in 1944. The general death rate was 13.2 per 1,000 and was 0.9 below the average of the five preceding years. The death rate from all forms of tuberculosis was 79 per 100,000 and for respiratory tuberculosis 60. These rates were 3 and 2 less than in the preceding year. The marriage rate of 9.4 per 1,000 was, with the exception of 1920 and 1940, the highest rate recorded in Scotland.

Quarterly Returns for Eire

The birth rate during the fourth quarter of 1945 was 20.7 per 1,000, an increase of 0.4 on the preceding December quarter. Infant mortality was 70 per 1,000 registered births and was 11 below the rate for the preceding fourth quarter. The general death rate was 12.6, being 1.6 below the rate for the corresponding quarter of 1944.

For the whole year the birth rate was 22.3 per 1,000, which was 0.1 above the rate for 1944. The infant mortality, 69 per 1,000 registered births, was 10 below the rate of the preceding year. The general death rate was 14.4 per 1,000, a decrease of 0.9 on 1944. Deaths from diarrhoea and enteritis in infants under 2 years numbered 1,062, compared with an average of 960 for the five preceding years. Altogether 2,720 deaths were attributed to pulmonary tuberculosis and 889 to other forms; the five-years averages were 3,127 and 851 respectively.

Week Ending March 23

The notifications of infectious diseases during the week in England and Wales included: scarlet fever 1,325, whooping-cough 2,190, diphtheria 417, measles 1,875, acute pneumonia 976, cerebrospinal fever 67, dysentery 332, paratyphoid 4, typhoid 6. In the great towns 77 deaths were attributed to influenza.

No. 11

INFECTIOUS DISEASES AND VITAL STATISTICS

We print below a summary of Infectious Diseases and Vital Statistics in the British Isles during the week ended March 16.

Figures of Principal Notifiable Diseases for the week and those for the corresponding week last year, for: (a) England and Wales (London included). (b) London (administrative county). (c) Scotland. (d) Eire. (e) Northern Ireland.

Figures of Births and Deaths, and of Deaths recorded under each infectious disease, are for: (a) The 126 great towns in England and Wales (including London). (b) London (administrative county). (c) The 16 principal towns in Scotland. (d) The 13 principal towns in Eire. (e) The 10 principal towns in Northern Ireland.

A dash — denotes no cases; a blank space denotes disease not notifiable or no return available.

Disease	1946 (a)	(b)	(c)	(d)	(e)	1945 (Corresponding Week) (a)	(b)	(c)	(d)	(e)
Cerebrospinal fever	65	7	32	—	3	81	6	31	2	1
Deaths		1	—				3	1		
Diphtheria	475	33	55	50	13	558	22	131	97	8
Deaths	12	1	—	4	—	11	2	—	1	—
Dysentery	375	40	49	1	1	428	45	252	2	—
Deaths				—	—				—	—
Encephalitis lethargica, acute	3	—	—	—	—	1	—	—	—	—
Deaths		—					—			
Erysipelas			43	4	5			39	8	2
Deaths		—					1			
Infective enteritis or diarrhoea under 2 years				38					7	
Deaths	72	8	12	16	1	60	6	6	9	5
Measles*	1,605	430	537	43	—	25,266	1498	351	25	54
Deaths	3	—	1	1	—	26	2	2	—	—
Ophthalmia neonatorum	60	2	12	1	—	76	2	15	—	—
Deaths										
Paratyphoid fever	1	—	1 (B)	—	1 (B)	10	1	1 (B)	2 (B)	—
Deaths	—	—	—	—	—	1	—	—	—	—
Pneumonia, influenzal	1,006	62	35	27	4	876	47	9	2	4
Deaths (from influenza)†	93	9	5	8	5	27	3	5	—	—
Pneumonia, primary			337	28				248	35	
Deaths		68		14	18		53		12	2
Polio-encephalitis, acute	—	—				1	—			
Deaths		—					—			
Poliomyelitis, acute	4	—	—	—	—	—	—	—	—	—
Deaths		—					—			
Puerperal fever		1	16		—		5	10		—
Deaths										
Puerperal pyrexia‡	134	12	21	1	—	149	10	9	1	1
Deaths		—					—			
Relapsing fever	—	—			—	—	—			—
Deaths										
Scarlet fever	1,143	88	164	31	14	1,621	62	201	19	41
Deaths	—	—	—	—	—	2	—	1	—	1
Smallpox	3§	—	—	—	—	—	—	1	—	—
Deaths				—	—				—	—
Typhoid fever	6	—	—	7	1	6	—	—	11	1
Deaths	1	—	—	—	—	1	—	—	—	—
Typhus fever	—	—	—	—	—	—	—	—	—	—
Deaths				—	—				—	—
Whooping-cough*	2,006	178	114	25	6	1,527	71	149	26	21
Deaths	6	—	—	3	—	10	1	2	1	1
Deaths (0–1 year)	441	51	69	56	22	411	50	27	30	17
Infant mortality rate (per 1,000 live births)										
Deaths (excluding still-births)	6,152	984	796	292	181	5,053	798	580	181	127
Annual death rate (per 1,000 persons living)			17·5	18·7				13·2	11·7	
Live births	7,685	1,228	965	471	282	6,432	672	797	343	250
Annual rate per 1,000 persons living			19·4	30·2				15·9	22·1	
Stillbirths	259	29	38			227	23	38		
Rate per 1,000 total births (including stillborn)			38					33		

* Measles and whooping-cough are not notifiable in Scotland, and the returns are therefore an approximation only.

† Includes primary form for England and Wales, London (administrative county), and Northern Ireland.

‡ Includes puerperal fever for England and Wales and Eire.

§ Including one imported case.

Letters, Notes, and Answers

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ANY QUESTIONS?

Excluding Gonorrhoea

Q.—*Is the complement-fixation test reliable in the sense that if negative it rules out any possibility of previous gonorrhoea? Can you recommend any other tests to exclude gonorrhoea in a couple who believe in premarital examination?*

A.—The answer to the first part of the question is in the negative, but the same applies, of course, to both Wassermann and Kahn reactions as regards syphilis—that is to say, a negative reaction is of very limited value, whereas a positive one should be considered an indication for a careful examination.

The only satisfactory way of excluding gonorrhoea, unless a *reliable* negative history is obtainable, is to go through the whole gamut of "tests of cure," found in detail in any textbook on the subject. The above in no way disparages the gonococcal complement-fixation reaction, which, in experienced hands, bears much the same relation to gonorrhoea as the Wassermann and Kahn reactions do to syphilis, though it must be remembered that antibody production is not nearly so great or so persistent in gonorrhoea as in syphilis.

Morphine and Atropine

Q.—*What are the general and special indications for giving atropine 1/100 gr. (0.65 mg.) with morphine, and when is the addition of atropine best avoided?*

A.—Atropine may be combined with morphine when there is any tendency to nausea and vomiting or to respiratory depression. It is well to add atropine to morphine whenever the latter is given in unduly large dosage—e.g., 1/2 grain (32 mg.)—to counteract the depressing action on the respiration, though the protective action of the atropine should not be overrated. Atropine is frequently combined with morphine before operations to check excessive secretion, though for premedication of this type hyoscine is often preferred. Atropine is also added when morphine is administered for the relief of the colicky pain of smooth-muscle spasm. The drawbacks to atropine are the dry skin, lessened secretion, quickened heart, and dilated pupils, and it should therefore be withheld when these side-effects will outweigh its adjuvant action. People vary greatly in their liability to nausea after morphine and in their sensitivity to atropine, and these individual susceptibilities must often decide whether or not atropine is added to morphine.

Spastic Colon

Q.—*A lady aged 60 appears to be suffering from spastic colon. What is the treatment?*

A.—It has been said that some people fight out their emotional conflicts in the gastro-intestinal tract, and there is no doubt that emotional tension and fatigue play a predominant role in colon spasm. It will be generally agreed that certain individuals have a constitutional tendency to colon spasm, as others have a tendency to asthma, migraine, or hypertension, and they must learn to live with their colons. Treatment should therefore begin with analysis of the emotional situation. At this time of life cancerophobia is a common provocation of colon spasm. Care should be taken that the patient has adequate sleep and rest and is protected against cold, and a hobby of a creative kind may be of considerable value. Barbiturates may be used as sedatives and hypnotics. A second possible factor is allergy. Skin tests are not of much value in intestinal allergy, and it is much better to see if any relation can be traced between the onset of attacks and ingestion of certain foods. A bland, non-roughage diet is probably best, and if aperients are required they should be mild ones, such as the mucilaginous aperients, liquid paraffin, and magnesium hydroxide. Unless the faeces become hard and impacted enemata and lavage are undesirable, because they focus attention on the colon and very easily become a habit, which is not psychologically healthy. When the pain is troublesome, bed and hot bottles will usually give relief, and belladonna may also be used in increasing dosage until the spasm is relieved or toxic symptoms occur.

Effect of Foods on Mothers' Milk

Q.—*How soon after a meal are the products of digestion to be found in the lactating breast? Is there any truth in the belief that cauliflower in the mothers' diet gives babies a "windy" night?*

A.—This inquiry is presumably concerned with the time of the appearance of the products of digestion in the milk itself. This is probably best gauged by the time at which chemical substances, such as iodine and quinine, can be demonstrated in human milk after a single administration. If given intravenously they first appear between 15 and 30 minutes afterwards, and can be detected up to 24 hours but not after 48 hours; the maximum concentration is found between 4 and 12 hours after injection. On oral administration, as might be expected, their appearance in the milk may be delayed until 4 to 6 hours after ingestion.

It has long been supposed that various foodstuffs, particularly fruit and green vegetables, can affect the mother's milk and upset the child. This popular idea has never been substantiated scientifically, and on theoretical grounds it is difficult to believe they do. As regards green vegetables, it could be argued, however, that their iron content is suspect. Iron is secreted in the milk even when administered to the mother in therapeutic doses. It should be kept in mind, moreover, that if the mother takes something that causes violent diarrhoea or a general upset it might temporarily affect the quantity rather than the quality of the milk—with consequent reaction on the baby's part. It is all too easy for a mother—ever looking for a reason to explain why the baby had a bad night—to blame some article of diet, and the general opinion now is that the lactating woman can include in her diet all the usual foodstuffs (in ordinary amounts) without any fear of their upsetting the baby.

Nevertheless, perhaps it is wise to admit that there may be exceptions to the general rule, and even so great an authority as N. J. Eastman (*Expectant Motherhood*, 1942, London, John Murray), whilst sceptical of the old idea, expresses the view that there are occasional cases in which repeated trials appear to indicate a relation between the intake of a certain food and the development of colic in the baby.

Nightmares after Exertion

Q.—*A professional man retired at 49 on medical advice; his blood pressure was then, and still is, 180/105 mm. Hg. He is now 57, and by careful living has eliminated all his symptoms except one. He has severe night terrors, which are worse after exercise. Phenobarbitone at night relieves the condition for a few weeks and then ceases to have any effect. What is the treatment?*

A.—Nightmares often have a physiological basis, especially in exhaustive states. Exercise in this case may have an exhaustive effect. Nightmares may also be projections of physiological sensations or of repressed emotions, repressed rage appearing as wild beasts, sex as snakes or vampires. They may also be the emergence of some long-buried fear, going back to childhood, which it would require the special technique of analysis to discover. The form of the dreams associated with the night terror would help to throw light on the nature of the fear. But the terror may be of a simpler nature: for instance, if the patient has been warned or told, as most are, that high blood pressure may lead to sudden death, especially after exertion, the patient may continue—even though the danger is past—to have the subconscious dread. This may account for the fact that

the dread comes after exertion. A psychological investigation should bring the fear to the surface; but if exhaustion is suspected, tonics rather than hypnotics might be indicated.

Varying Fertility

Q.—*Is it possible for a male who was fertile at the age of 22 to be non-fertile at the age of 31? His wife is normal and fertile according to a competent gynaecologist. He has had no serious illness. What investigations are indicated?*

A.—Fertility is subject to great variations in the same individual, and it is quite possible that, even in the absence of any illness, a husband who was fertile at 22 may be non-fertile at 31. I have known cases in which plentiful spermatozoa were found, yet when a second specimen was taken a little later they were absent. A temporary occlusion of the ducts may completely change the results of semen analysis. The investigations recommended are semen analysis by an expert, and, if prolonged azoospermia is found, testicular biopsy. Should the case be one of only lowered fertility a post-coital test on the wife gives valuable information.

Morphine Administration

Q.—*In my experience morphine is absorbed much more quickly when given intramuscularly, and is more effective. Are there any objections to intramuscular, or to intravenous, injection?*

A.—There are no objections to the intramuscular route for morphine. Absorption is quicker than after subcutaneous injection. In cases of shock during the war many doctors gave morphine intravenously with excellent results; this route ensured that the morphine reached the centres in the brain where analgesia is produced and was not left in the subcutaneous tissues by a defective circulation. The full effect of an intravenous dose is usually obtained in 5 minutes.

Epilepsy Caused by Boxing

Q.—*Can epilepsy be caused by boxing?*

A.—Yes. E. Jokl (1934) described a boxer who sustained two seizures within a few minutes of a knock-out blow. Fits thereafter became established (see *Medical Aspects of Boxing*, Van Schaik, Pretoria, 1941). Epileptiform attacks have also been described by Critchley as a not uncommon feature of the "punch-drunk" syndrome in boxers. Among his series of 39 cases there were 5 examples. His paper, read before the 1945 meeting of the Association of British Neurologists, has not yet been published. The literature of the punch-drunk syndrome also holds a case report of a boxer who became liable to repeated tonico-clonic spasms, without unconsciousness, provoked by loud unexpected noises (G. W. Will, *J. R.A.M.C.*, 1939, 72, 389).

Causes of Cancer

Q.—*Has the exact cause of cancer been found? Young of Edinburgh did some promising work. Has it been proved? Is there anything in the theory of worm infestation from household pests—e.g., beetles, etc.? A brief note on the present position would be appreciated.*

A.—The exact cause of cancer has not been found. The work of Young has not been substantiated, and there is no evidence that household pests—e.g., beetles—cause cancer.

To write even a brief note on the present position of research into the cause of cancer would be impossible in the space allotted to "Any Questions?" but it can be stated that cancer may be started in many different ways. By applying to the skin of irritable animals, including man, one of many chemical substances, such as benzpyrene, an epithelioma can be caused. By feeding rats with the compound fluorene cancer of the skin, liver, kidney, thyroid gland, or of the anterior lobe of the pituitary body and of many other sites may be caused. Likewise by treating man or animals with *x* rays or radium—witness the *x*-ray cancers of the pioneer radiologists—cancer can be induced. Gross parasites, such as bilharzia in man or *Taenia crassicollis* in rats, cause cancer of the bladder in man or sarcoma of the liver in rats.

All these insults, chemical, physical, and parasitic, may set up conditions which end in cancer. But the intrinsic, or proximate, or near cause, the cause of the continued unlimited multiplication of the cancer cell, is not yet determined. It may be a virus or it may be a cell mutation.

House-dust Desensitization

Q.—*A lady has spasmodic rhinitis and is sensitive to house dust. Can she be immunized, and if so, how?*

A.—Extracts of house dust for desensitization may be obtained from a number of drug firms, or alternatively an autogenous extract can be prepared from dust collected from the patient's own home. In the terminology of Bray the strongest solution that can be prepared is known as A, from which are made dilutions of 10, 100, 1,000, 10,000, and 100,000, which are known as B, C, D, E, and F. Injections are given weekly, beginning with 0.1 ml. of the highest dilution. At each subsequent visit the dose is doubled, until the local reactions tend to be large, when each succeeding dose is increased only by 0.1 ml., but injections may be given bi-weekly. The course of injections occupies in general about three months. Techniques for more rapid desensitization are available, but they should be left to those with special experience of allergic diseases, as they are not without risk.

Penicillin in Cerebrospinal Fluid

Q.—*Intrathecal penicillin is a well-recognized form of therapy in the treatment of pneumococcal meningitis. Is a solution of penicillin (Pfizer) containing 10,000 units per ml. in distilled water of greater or less specific gravity than the cerebrospinal fluid? Would any advantage follow the tilting of the patient after the injection has been given?*

A.—There is no available information about the specific gravity of penicillin solutions. It would not necessarily be constant even for a particular make, since all penicillin contains varying amounts of impurities. The specific gravity of the cerebrospinal fluid itself is altered to a variable degree in meningitis; there can thus be no fixed figure with which to compare that of a penicillin solution.

It seems unlikely that positioning would facilitate the distribution of penicillin in the central nervous system, for the reason that satisfactory spread occurs without any such efforts. Whether this is due to fluid movement or to simple diffusion is not clear, but the facts are well established. Cairns and his colleagues (*Lancet*, 1944, **1**, 655) found not only that penicillin injected into the lateral ventricle appeared in the lumbar fluid, but that from one to six hours after lumbar injection substantial amounts were present in the cerebral fluid and even (in most cases) in the fluid of the lateral ventricles.

Theatre Drill for Caps and Masks

Q.—*What drill for caps and face masks do you recommend for the operating theatre in a teaching hospital? (a) Is it justifiable to don a freshly boiled, washed, and ironed cap and mask and then proceed to wash up and don sterile gown and gloves, admitting that one's cap and mask once applied cannot any longer be considered sterile? (b) Should one, after washing up, don a sterile cap and mask—a more difficult procedure for students unversed in theatre technique? (c) Should caps and masks be changed between operations, or can the same cap and mask be worn for a series of operations? (d) Is it ever justifiable for a surgeon to operate with his nose exposed? Surely the mask should always cover the nose?*

A.—*(a)* and *(b)* The function of a cap is to prevent an undue shower of bacterial dust falling from the operator's hair, etc., and that of the mask to stop dissemination of droplets from the mouth. It is impracticable to devise a method of putting on a cap or mask which would ensure that the external surfaces of both were sterile when they were in place on the operator's head; and even when they are in place bacteria from exposed skin, especially those rubbed off the skin by the edges of the cap on the forehead and the neck, and by the edges of the mask, may fall into the operating area. Caps and masks therefore need be donned only with reasonable precautions against soiling. I think the best procedure is for the operators to give their hands a thorough "social" wash, if necessary drying them on a clean towel, and then to put on cap and mask. The hands should then be fully scrubbed and the sterile gown put on. It is better

to start with sterile caps and masks, not because laundered caps and masks are likely in themselves to contain dangerous bacteria, but because there is no guarantee that they have not been handled by a carrier of dangerous organisms in their transit from the laundry to the operating theatre.

(c) Unless the cap or mask is grossly soiled with sweat, etc., there is no reason to change them during a series of operations. The mask should have at least one layer of material (cellophane or paper) in it that is impervious to droplets. If masks consisting only of a number of layers of gauze are used these should be changed frequently, since their inefficiency as a barrier against droplets increases greatly as they become damp.

(d) The justification for exposing the nose is, in the first place, things like gross misting of spectacles, etc., and, in the second, that apart from sneezes it is highly unlikely that any droplets or droplet nuclei are ever expelled from the nostrils. Nevertheless when the nose is outside the mask there is a greater chance of contamination of the wound by dry infective particles rubbed by the mask edge from the skin around the nose and on the upper lip. In this connexion it should be remembered that half or more of the population are nasal carriers of *Staph. aureus*, and that the skin below the nose and round the mouth is far more heavily contaminated with nasal staphylococci than the skin on the bridge of the nose and under the eyes, where the edge of the mask rubs when it is worn in an orthodox manner. On the whole, unless there are very good reasons for leaving the nose out of the mask, it should, as a routine, be included.

Indemnification Clause in Publishers' Agreements

Q.—*I have written an article on surgical practice. My publishers have sent me an agreement containing a clause by which I agree to indemnify them against all suits, or proceedings, for infringement of copyright, libel, etc. Is this usual?*

A.—Nearly all publishing agreements contain an indemnification clause of some sort. The following is a form of indemnification clause which is considered by the Society of Authors to be more satisfactory than clauses which appear in the standard forms of agreement used by many publishing firms: "The Author hereby warrants to the Publishers that the said work is in no way whatever an infringement of any existing copyright and that it contains nothing libellous, and the Author will indemnify the publishers against loss, injury, or damage (including any legal costs or expenses properly incurred) occasioned to the Publishers in consequence of any breach by the Author of this warranty."

Functional Renal Failure

Q.—*Investigation of a case of chronic sinusitis showed uric acid 5 mg. per 100 ml.; daily uric acid output in urine 585 mg. (normal 500 to 1,000); urine acidity 80% (normal 20 to 40%); blood urea 48 mg. per 100 ml. (normal 15 to 40 mg.); urea concentration (2½ hours) 45 (normal 50 or more); urea clearance 80% (normal 70% or more). Would you diagnose subclinical gout with secondary kidney affection, or some primary kidney affection with associated uric acid retention?*

A.—The rise in the blood urea and the fall in the urea concentration in the urine suggest that functional renal failure is present and are not evidence of subclinical gout under the circumstances. The urea clearance test gives very variable results even in the normal subject, so a single figure of 80% does not exclude the above view.

A Case of Bestiality

Q.—*An old man of 80 has been charged with having had connexion with one of his sows. What tests should be made to clear him of the charge?*

A.—First, it is desirable to exclude those things which might be expected if the accused were guilty—for example, the possible injury of the parts which might be seen in a small superficial tear in the fraenum of the penis. Seminal staining of the genitalia, thighs, and clothing worn at the time of the alleged act, with demonstration of spermatozoa therein, is to be expected. It is also to be expected that hairs might be found adhering to the genitalia and body of the accused, and to his clothing—particularly hairs incorporated in seminal matter. Examination of such hairs, with microscopical examination with those from the sow, would be the most important corroborative sign to be found in the examination of the accused in support of the charge, and if this examination has not been carried out it should be stressed to the advantage of the accused.

In the examination of the sow, attention should have been directed towards superficial injury to the mucous membrane; and smears taken from the parts should show the presence of human spermatozoa, which, by the way, might be confused with pig sperms.

If he is a man of 80 the vital question in defence will be the power of erection. Potency is unlikely at his age and the doctor should make a strong point of that fact. In the absence of the incriminating signs which I have mentioned, and giving due regard to the question of age and potency, there seems to be a good case for defence. No medical evidence, however, can rebut direct evidence of the offence if such evidence is brought forward. The most that can be done is to stress the negative side of the evidence, and possibly, in mitigation, the mental state of the old man and the condition of his prostate.

INCOME TAX

Deductions for Use of Car

A correspondent has suggested that it is desirable to clarify one or two points arising out of the note which, with regard to the effect of the Income Tax Act, 1945, appeared in our issue of Jan. 26. It is a condition applicable either to a "balancing allowance" or to a "balancing charge" that the car shall be sold "before the trade is permanently discontinued." In the case of a "sole" practice, therefore, it would seem that the provision will not apply if the car is retained until the date as from which the practice is sold. In the fairly common case of a partnership in which the operation of the previous year's average basis is not interrupted (the individuals concerned having exercised their option under Schedule D, Rule II, for the continuance of that basis) it is arguable that the practice has not been "permanently discontinued," and therefore that a subsequent sale of the car will be within the scope of the provision—presumably with some adjustment in respect of the period of non-professional use. Although *purchases* of cars after April 5, 1944, come within the provision, that is not the case as regards *sales* prior to April 6, 1946. Such a sale is, however, perhaps more likely to attract a "balancing charge" than a "balancing allowance," and the difference of treatment is in general not one to which objection can reasonably be taken. While the old "obsolescence" allowance is withdrawn by Section 18 (2) of the Act the option to claim the replacement cost of a car, which depends on Schedule D, Rule 3 (d), appears to remain open, but is likely to prove less favourable than the new scheme of allowances would be.

Loss on Outside Activity

P. K. proposes to convert some land into a small holding with a view to working it at a profit. How can he so arrange matters as to enable him to set off a loss—if one is incurred—from his earned income?

*** No special arrangement is necessary. Section 34 of the Income Tax Act, 1918, provides relief against income for a loss sustained ". . . in the occupation of lands for the purpose of husbandry." If he were to create a company to take over the small holding he would destroy that relief, because it would be given only against the income of the person in occupation of the land—i.e., of the company. Capital outlay does not normally give grounds for deduction from gross receipts, but, of course, the usual allowances can be claimed for the use of plant and machinery.

Government Payments to Staff through Medical Staff Fund

W. R. writes: E.M.S. payments were made by the Ministry of Health not to individual members of the staffs, but to the medical staff of each hospital, through the hospital itself. In my hospital these payments were placed in a medical staff fund, to be allotted as the medical staff might decide. Can the income-tax authorities make any claim for payment of tax from these funds before they are distributed to individual members of the medical staff, or otherwise?

*** On the facts stated above the hospital was a conduit pipe for passing the fees to the appropriate recipients, and could not properly be charged to income tax as being beneficially interested in those fees. On the other hand there seems to be ground for regarding the hospital as liable to deal with the payments made by the hospital to those members of the staff entitled to them on distribution of the fund as within "pay-as-you-earn"; "employer" is defined in the Statutory Regulations as meaning "any person paying emoluments whether on his own account or on behalf of another person." Some consultation with the local inspector of taxes seems desirable.

LETTERS, NOTES, ETC.

Raynaud's Syndrome

Mr. H. T. SIMMONS, F.R.C.S. (Manchester), writes: On page 263 of the *Journal* of Feb. 16 there appears an answer to a question on the Raynaud syndrome. Whilst this reply would be appreciated by anyone versed in the Raynaud syndrome as very fair and well informed it contains a statement so misleading that it should not be allowed to stand without correction. It is stated that a cervical sympathectomy will cause a disfiguring enophthalmos. This is true enough, but a cervical sympathectomy would not be done to denervate the arterial supply of the upper extremity. The operation of preganglionic thoracic sympathectomy devised by Smithwick in America and by Telford in this country has been generally practised since 1935. The operation results in complete sympathetic denervation of the arm; it divides no fibres going to the eye. There is no Horner's syndrome and the possibility of enophthalmos does not arise.

Mr. D. W. C. NORTHFIELD (Enfield) writes: In answer to a question concerning the treatment of Raynaud's syndrome (Feb. 16, p. 263) it is stated that disfiguring enophthalmos resuks from bilateral cervical sympathectomy. Bilateral enophthalmos is hardly noticed by a layman. But this operation is not now usually performed for this condition. For other good reasons the commonly accepted and most effective operation is that of Smithwick, in which the sympathetic supply to the arm is divided but not that to the head and neck, and consequently Horner's syndrome does not occur.

Morphine in Coronary Thrombosis

Drs. F. L. LYDON and M. M. LING (Keighley) write: In the column "Any Questions?" of Feb. 2 (p. 191) a point of great importance was raised which we feel has for many years called for critical review—i.e., the practice of giving morphine in full doses to cases of coronary thrombosis. The answer took the familiar form of advising that morphine be given, but the following considerations, we suggest, throw doubt upon the wisdom of this procedure. (1) Coronary thrombosis occurs at rest. Morphine by its indirect effect on the general circulation, especially when combined with absolute rest in bed, must, of necessity, by further reducing coronary flow, favour extension of the pathological process. (2) The marked depressant effect of morphine on the respiratory centre must tend to bring about the common and often fatal complication of pulmonary oedema. (3) Pain of cardiac origin (whether due to coronary thrombosis or angina of effort) seems to have a peculiar psychological effect on the observer. Once its true cardiac significance is accepted the severity appears to be automatically increased, probably due, it may not be unreasonably urged, to the lavish use of terms such as "agonizing" to describe anginal pain. How frequently do we forget that the pain can be trivial (it may be absent), and how often are the signs of dyspnoea and collapse adduced as objective evidence of severity? This aspect of the pain is stressed deliberately, since we believe that its relief is not immediately necessary (or even advisable) in many cases. (4) Since ischaemia of the cardiac muscle is now accepted as the basic feature of cardiac pain rational therapeutics directs that increase of coronary flow and not the relief of pain as such should be our aim. Considerations such as the foregoing, and many others too numerous to deal with in a short letter, have led us to avoid morphine if possible, and to depend upon other preparations, especially nikethamide, in cases of coronary thrombosis and in the routine treatment of angina of effort. Suggestive results have been obtained, but the whole subject is one of great complexity and further trials will be made on these lines.

Coccygodynia or Proctalgia?

DR. JAMES FLEMING (Glasgow) writes: I have had under my care recently a man aged 30 whose symptoms are exactly similar to those described under the above heading (Feb. 23, p. 304). *X*-ray examination of his lower spine and pelvis revealed a marked spina bifida, involving the spinous process of the first sacral segment. There was hair growing in the middle line from the post-anal region to the base of the sacrum, and a depression over the missing spinous process. I had come to the conclusion that the spina bifida occulta had probably nothing to do with his symptoms, but it would be interesting to learn if a spina bifida has been sought for and found in any other cases of this type.

Dr. T. ASTLEY COOPER (Birmingham) writes: In the *Journal* of Feb. 2 (p. 192) you were kind enough to publish a note regarding a troublesome complaint about which I had been consulted and which I attributed to a form of coccygodynia; you printed my letter under this term. I have had many letters in response, and the condition seems so vague, and to affect so many medical men personally, that I wondered if you could spare a little more space for the insertion of a summary I have made. From the variety of possible causes given (all abstracted from letters) the condition seems to be one of real interest, and if my summary sheds any light on treatment it will be of some use to medical friends who are themselves victims of this complaint.

Definition.—Paroxysmal proctalgia; proctalgia fugax; rectal crises of non-syphilitic origin.

Incidence.—More common than would appear. Six medical men (including myself) report personal experience of this trouble, though I have been consulted about it only once in general practice over many years.

Sex and Age.—The only cases reported to me have been in males; often starting in childhood.

Symptoms.—Pain, varying in intensity, often excruciating, sickening, and unbearable, starting usually as a vague discomfort in the sacral region or lower end of the rectum and gradually developing into an intense neuralgia. Pain lasts a variable time and is usually relieved by the passage of flatus and/or faeces. It not uncommonly wakes the patient during the night, and is sometimes associated with syncope, shock, and collapse. The pain is made worse by overwork and excessive smoking; it sometimes follows sexual intercourse, especially coitus interruptus; and it sometimes follows defaecation.

Causation.—Not definitely known. The following points have, however, been brought out: ? due to muscular spasm or "sphincter cramp" (cf. spasm of colon or pyiorus); ? due to irritability of nervous system; ? associated with a mild chronic inflammatory condition of the colon and/or rectum; ? due to prostatic disturbance; ? due to "ballooning" of rectum with flatus; ? due to sexual excess relative to one's capacity at a given time; ? due to seminal vesicular pressure; ? due to a "pocket" in the rectum which at times fills with flatus, the pain being due to the musculature attempting to drive this out.

Treatment.—Nothing certain. The following have been tried: distension of the rectum with water or air by syringe; insertion of glycerin suppository; heat to perineum; pressure to perineum; straining to produce an evacuation of the bowel which relieves by ? stretching the sphincter; traction on the anal hairs; amyl nitrite inhalations.

Causation of Facial Tic

Dr. E. S. STERN writes: In the answer to the above question (Feb. 23, p. 302), the suggestion that slight local irritation—e.g., an unerupted molar or chronic middle-ear discomfort—may discharge itself in the form of a facial tic seems wildly improbable on anatomical grounds, and also on length of history. That it could be due to a slight displacement of a vertebra is anatomically quite impossible, nor is it likely that such displacement would fail to show on *x*-ray examination. If the patient really is suffering from facial tic and not facial spasm it is hysterical in origin, and the only correct treatment is psychotherapy. In such cases, if once an attempt at physical treatment is made, the patient, who is, of course, loath to admit its emotional origin, will readily grasp at the fact of physical treatment backed by medical authority, and believe her illness to be organic, so that her resistance to proper psychiatric treatment will be so strengthened that she will probably become incurable.

Dr. R. M. NORMAN (Stapleton, Bristol) writes: The answer given to the question about treatment in a case of facial tic ("Any Questions?" Feb. 23, p. 302) has caused astonishment to several readers besides myself. It is stated, "Perhaps the simplest, and possibly correct, diagnosis is that she had a previous slight displacement of a vertebra from a fall (which sometimes even an *x*-ray investigation cannot detect). . . . A manipulative surgeon might put it right." It is hardly conceivable that the question was referred by you to an osteopath, and it came as a shock to read in your columns under the guise of expert guidance the same sort of humbug which some years ago the B.M.A. went to so much trouble and expense to discredit. Unless there is indeed some reasonable basis for the belief that spinal injury and facial tic are causally related it seems regrettable that this answer was not suppressed and a competent specialist consulted, as a few more irresponsible answers of this type will surely undermine one's confidence in the value of this section of the *Journal*.

Descent of the Testis: A Protest

Dr. E. R. WIDE writes from Hôpital de la Congo Balolo Mission: There would seem to be no limit to the credulity of the modern version of *Homo sapiens*. Your issue of Nov. 3, 1945, has just reached me with the article "Descent of the Testis in Relation to Temperature." Since the whole migration of the testis normally takes place *in utero*, how can scrotal temperature have anything to do with it? Your contributor states, "I believe that the migration is a search for a lower temperature." "Search" by what? Presumably by the testicle. The verb "search" surely propounds purposeful action, so we must now invest the testicle with powers of choice in the matter! As well say, "In the course of the ages water decided that it would be better for things in general if it had its maximum density at 4° C. instead of at freezing-point." It doesn't make sense. The moderns seem to be too hard-boiled to admit the possibility of there being any design in our make-up.